

IN SUCCESSFUL COMPANIES,
CONTINUOUS ACHIEVEMENT IS DRIVEN
BY INNOVATION AND UNDERSTANDING.
CREATING A PRODUCT OR PROCESS IS
ONLY A FIRST STEP - MAINTAINING THE
MOMENTUM OF PROGRESS AND SUCCESS
OVER MANY YEARS REQUIRES
A DEMANDING SET OF DISCIPLINES.

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## **Corporate Statement**



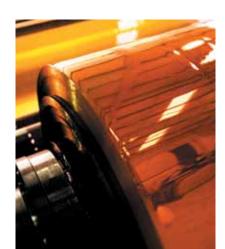
## AN INVESTMENT IN THE FUTURE

DIRECTORS OF PHOTOGRAPHY
WORLDWIDE RELY ON THE
CONSISTENT AND REPEATABLE
PERFORMANCE OF LEE FILTERS.

Lighting designers are a demanding bunch – and understandably so. Whether they work in film, television, theatre, entertainment or architecture, it is essential that their equipment is capable of producing precise, reliable and repeatable results.

It is the ability to meet these demands that has kept LEE Filters at the forefront of lighting filter manufacture for more than 40 years – ever since cinematographer David Holmes used his expertise and the results of his extensive research to pioneer the use of modern polymeric materials in the making of lighting filters.

We are particularly proud of the fact that all our filters are produced at our manufacturing facility in Andover. This allows us to retain complete control over the coating process and ensures we maintain the high standards to which our clients have become accustomed.



## **Corporate Statement**



FROM BROADWAY TO THE WEST END AND FROM THE STAGE TO THE BOX OFFICE, LEE FILTERS PROVIDES THE TOOLS TO GET THE JOB DONE.

And the reason why LEE Filters is able to hold its position as the world's leading manufacturer of lighting filter products? It's because we understand and appreciate the fact that our customers depend on us to produce filters of exceptional quality.

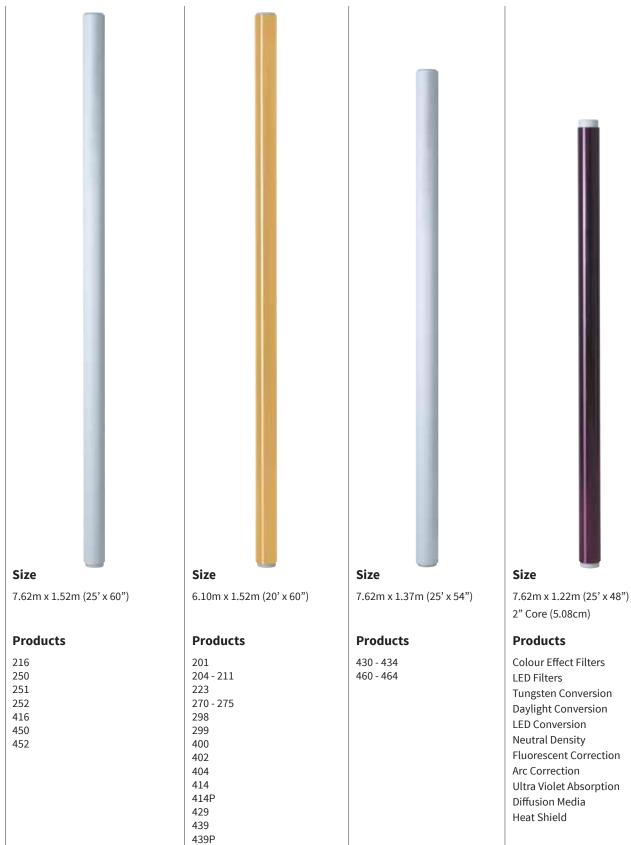
Our continual investment in research and development means that our dedicated team is in a position not only to consistently embrace new technologies, but also to listen to customers' requests and act upon them. Marrying our technical expertise with our ability to respond quickly to consumer demand is what sets us apart from our competitors.

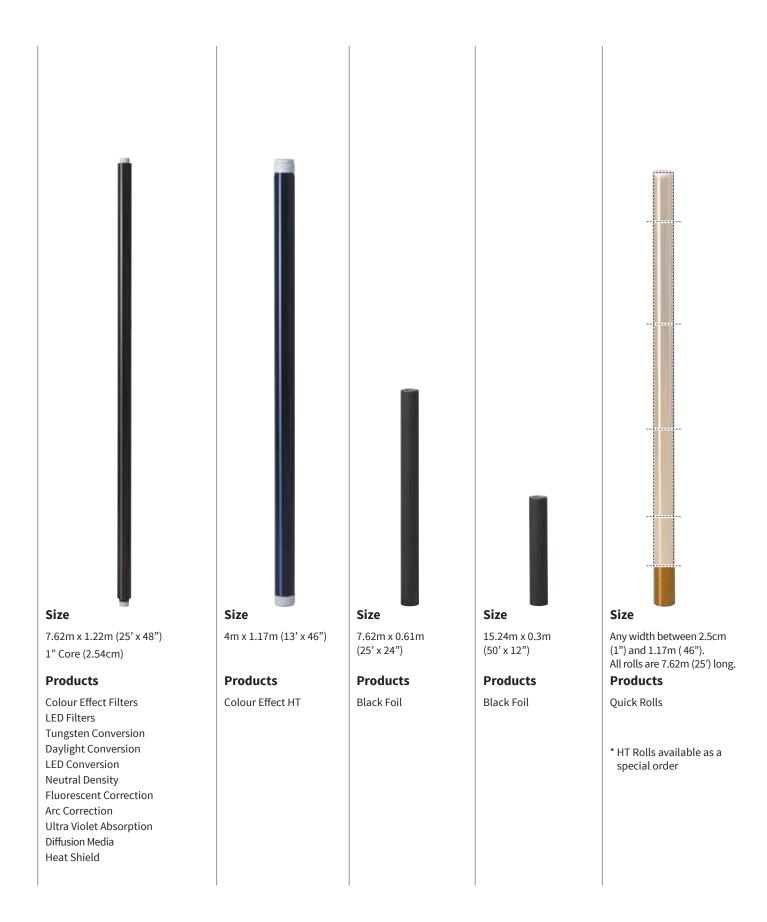
In recent years, we have taken this communication one step further, with the introduction of the Designer Series. All the colours in this range are created in conjunction with some of the world's leading lighting designers. After all, who knows better than the users themselves exactly which colour will realise their creative vision?

At LEE Filters, we are proud to lead the way in meeting the requirements of lighting professionals the world over.

## **Roll Sizes**

Our products come in many different sizes, please use the diagrams below as a guide.





# Sheet Sizes

## **Acrylic Panel**

#### Size

Panel 2.44m x 1.52m (8' x 5') Thickness 3mm (1/8")

#### **Products**

A209 A210

A211

## **Acrylic Panel**

#### Size

Panel 2.44m x 1.22m (8' x 4') Thickness 3mm (1/8")

#### **Products**

A205

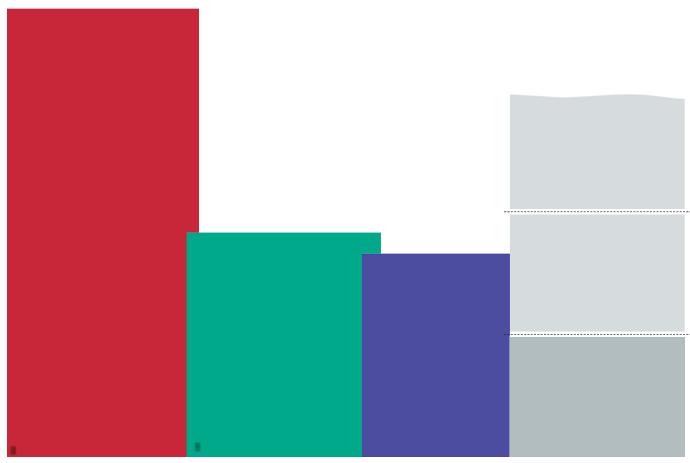
A207

A208

A209

A210

A211



| Full Sheet                | Half Sheet                | Half Sheet HT             | Polariser  |
|---------------------------|---------------------------|---------------------------|--|
| Size                      | Size                      | Size                      | Size   |
| Full Sheet                | Half Sheet                | Half Sheet HT             | Available in 0.3m (1') lengths                     |
| 0.53m x 1.22m (21" x 48") | 0.53m x 0.61m (21" x 24") | 0.53m x 0.56m (21" x 22") | Sheets come in 0.43m (17") and 1.45m (57") widths. |
| Products                  | Products                  | Products                  | Products   |
| Colour Effect Filters     | Colour Effect Filters     | Colour Effect HT          | Polariser  |
| LED Filters               | LED Filters               |                           |  |
| Tungsten Conversion       | Tungsten Conversion       |                           |  |
| Daylight Conversion       | Daylight Conversion       |                           |  |
| LED Conversion            | LED Conversion            |                           |  |
| Neutral Density           | Neutral Density           |                           |  |
| Fluorescent Correction    | Fluorescent Correction    |                           |  |
| Arc Correction            | Arc Correction            |                           |  |
| Ultra Violet Absorption   | Ultra Violet Absorption   |                           |  |
| Diffusion Media           | Diffusion Media           |                           |  |
| Heat Shield               | Heat Shield               |                           |  |

# Quick Rolls And Lighting Packs

# **QUICK ROLLS**

HT QUICK ROLLS ARE AVAILABLE AS A SPECIAL ORDER.

#### Your high volume solution

Quick Rolls enable you to have a roll of any colour in any width, saving you both time and money. The Quick Roll is pre-cut to your chosen width, so the gel is ready to frame in just one cut, putting an end to waste on the cutting room floor.

Quick Rolls are sold by the width in inches (2.54cm) up to a maximum width of 46" (1.17m) and all rolls are 25' (7.62m) long.

An average cost saving of between 20-30% can be obtained using Quick Rolls compared to buying individual sheets.





## LIGHTING PACKS

#### **Essential Toolkits for Lighting Control**

Everything you need to control common lighting conditions. Each pack contains a select assortment of 250mm x 300mm (10"x12") pre-cut sheets of LEE lighting filter. A rugged vinyl pouch is ideal for portable storage.

# Colour Effects Pack Colour the backdrop or draw focus with colour.

| No. | Name          | Qty |
|-----|---------------|-----|
| 106 | Primary Red   | 2   |
| 139 | Primary Green | 2   |
| 119 | Dark Blue     | 2   |
| 010 | Medium Yellow | 2   |
| 790 | Moroccan Pink | 2   |
| 181 | Congo Blue    | 2   |

| Cosmetic Pack  |                      |     |
|--|----------------------|-----|
| Enhance skin tone by combining pale tints with subtle diffusion. |                      |     |
| No.  | Name                 | Qty |
| 184  | Cosmetic Peach       | 2   |
| 187  | Cosmetic Rouge       | 2   |
| 188  | Cosmetic Highlight   | 2   |
| 186  | Cosmetic Silver Rose | 2   |
| 775  | Soft Amber Key 2     | 2   |
| 791  | Moroccan Frost       | 2   |
|  |                      |     |

| Diffusion Pack                                |
|---|
| Soften shadows, adjust contrast, shape light. |

| No. | Name                 | Qty |
|-----|----------------------|-----|
| 216 | Full White Diffusion | 2   |
| 250 | 1/2 White Diffusion  | 2   |
| 251 | 1/4 White Diffusion  | 2   |
| 400 | LEELux               | 2   |
| 410 | Opal Frost           | 2   |
| 253 | Hampshire Frost      | 2   |

| Daylı                                 | ght Io lungsten Pack  |     |
|---------------------------------------|-----------------------|-----|
| Convert daylight sources to tungsten. |                       |     |
|                                       |                       |     |
| No.                                   | Name                  | Qty |
| 204                                   | Full CTO              | 2   |
| 285                                   | ¾ CTO                 | 2   |
| 205                                   | ½ CTO                 | 2   |
| 206                                   | 1/4 CTO               | 2   |
| 223                                   | 1/8 CTO               | 2   |
| 208                                   | Full CTO + .6ND Combo | 2   |
|                                       |                       |     |

| Tungsten To Daylight Pack      |
|--------------------------------|
| Convert tungsten light sources |

to daylight.

| No. | Name                  | Qty |
|-----|-----------------------|-----|
| 200 | Double CTB            | 2   |
| 201 | Full CTB              | 2   |
| 202 | ½ CTB                 | 2   |
| 203 | 1/4 CTB               | 2   |
| 218 | 1/8 CTB               | 2   |
| 720 | Durham Daylight Frost | 2   |

| LED To Tungsten Pack   |                       |     |
|--|-----------------------|-----|
| Convert cool white LED to tungsten.<br>Soften shadows and adjust contrast. |                       |     |
| No.  | Name                  | Qty |
| 216  | Full White Diffusion  | 2   |
| 250  | 1/2 White Diffusion   | 2   |
| 622  | 1 1/8 Digital LED CTO | 2   |
| 624  | Full Digital LED CTO  | 2   |
| 626  | % Digital LED CTO     | 2   |
| 628  | ¾ Digital LED CTO     | 2   |

# Quick Rolls And Lighting Packs

#### **Quick Location Pack**

A variety of colour-correction, effect, and light-shaping tools to control common lighting conditions.

| No. | Name                  | Qty |
|-----|-----------------------|-----|
| 201 | Full CTB              | 2   |
| 202 | ½ CTB                 | 2   |
| 204 | Full CTO              | 2   |
| 205 | ½ CTO                 | 2   |
| 216 | Full White Diffusion  | 2   |
| 250 | 1/2 White Diffusion   | 2   |
| 210 | .6 ND                 | 2   |
| 106 | Primary Red           | 1   |
| 181 | Congo Blue            | 1   |
| 738 | JAS Green             | 1   |
| 187 | Cosmetic Rouge        | 1   |
| 188 | Cosmetic Highlight    | 1   |
| 791 | Moroccan Frost        | 1   |
| 775 | Soft Amber Key 2      | 1   |
| 720 | Durham Daylight Frost | 1   |
| 270 | LEE Scrim             | 1   |
| 280 | Black Foil            | 1   |

#### Master Location Pack

Our largest variety of colour-correction, effect, and light-shaping tools to provide the control you need to master any lighting condition.

| No. | Name                 | Qty |
|-----|----------------------|-----|
| 200 | Double CTB           | 2   |
| 201 | Full CTB             | 2   |
| 202 | ½ CTB                | 2   |
| 203 | 1/4 CTB              | 2   |
| 204 | Full CTO             | 2   |
| 205 | ½ CTO                | 2   |
| 206 | 1/4 CTO              | 2   |
| 216 | Full White Diffusion | 2   |
| 250 | 1/2 White Diffusion  | 2   |
| 251 | 1/4 White Diffusion  | 2   |
| 210 | .6 ND                | 2   |
| 106 | Primary Red          | 1   |
| 126 | Mauve                | 1   |
| 181 | Congo Blue           | 1   |
| 738 | JAS Green            | 1   |
| 187 | Cosmetic Rouge       | 1   |
| 188 | Cosmetic Highlight   | 1   |

| 791 | Moroccan Frost        | 1 |
|-----|-----------------------|---|
| 775 | Soft Amber Key 2      | 1 |
| 720 | Durham Daylight Frost | 1 |
| 244 | Plus Green            | 1 |
| 245 | ½ Plus Green          | 1 |
| 219 | Fluorescent Green     | 1 |
| 270 | LEE Scrim             | 1 |
| 280 | Black Foil            | 1 |

# **MUSIC PACKS**

These convenient, pre-cut 250mm x 250mm (10"x10") sheets of LEE polyester filters come complete with instructions on how to use colour to enhance the mood of your music. They are perfect for use in small night clubs and are packaged in six different sets.

| DJ Pack 1 |                         |     |
|-----------|-------------------------|-----|
| No.       | Name                    | Qty |
| 015       | Deep Straw              | 1   |
| 020       | Medium Amber            | 1   |
| 024       | Scarlet                 | 1   |
| 026       | Bright Red              | 1   |
| 048       | Rose Purple             | 1   |
| 068       | Sky Blue                | 1   |
| 116       | Medium Blue-Green       | 1   |
| 181       | Congo Blue              | 1   |
| 323       | Jade                    | 1   |
| 325       | Mallard Green           | 1   |
| 328       | Follies Pink            | 1   |
| 343       | Special Medium Lavender | 1   |

| DJ Pack 2 |               |     |
|-----------|---------------|-----|
| No.       | Name          | Qty |
| 027       | Medium Red    | 1   |
| 089       | Moss Green    | 1   |
| 105       | Orange        | 1   |
| 113       | Magenta       | 1   |
| 141       | Bright Blue   | 1   |
| 180       | Dark Lavender | 1   |
| 197       | Alice Blue    | 1   |
| 328       | Follies Pink  | 1   |
| 735       | Velvet Green  | 1   |
| 744       | Dirty White   | 1   |
| 781       | Terry Red     | 1   |
| 797       | Deep Purple   | 1   |

| Inspiration Pack 1 |                 |     |
|--------------------|-----------------|-----|
| No.                | Name            | Qty |
| 009                | Pale Amber Gold | 3   |
| 058                | Lavender        | 3   |
| 143                | Pale Navy Blue  | 3   |
| 195                | Zenith Blue     | 3   |



3

3

3

| Rock n' Roll Pack 1 |                   |     |  |
|---------------------|-------------------|-----|--|
| No.                 | Name              | Qty |  |
| 116                 | Medium Blue-Green | 3   |  |
| 128                 | Bright Pink       | 3   |  |
| 158                 | Deep Orange       | 3   |  |
| 181                 | Congo Blue        | 3   |  |

Primary Red

Velvet Green

764

Sun Colour Straw

| Rock n' Roll Pack 2 |              |     |  |
|---------------------|--------------|-----|--|
| No.                 | Name         | Qty |  |
| 048                 | Rose Purple  | 3   |  |
| 132                 | Medium Blue  | 3   |  |
| 327                 | Forest Green | 3   |  |
| 341                 | Plum         | 3   |  |

# Quick Rolls And Lighting Packs

## **COLOUR MAGIC PACKS**

The LEE Filters Colour Magic series is a set of eight individual packs, each containing a selection of 12 filters 250mm x 300mm (10" x 12") that relate to a particular aspect of lighting and studio work.

Colour Magic offers an opportunity to get to know the performance of the various filters on offer in a cost-effective way.

| Original Pack              |   |  |
|----------------------------|---|--|
| Create 50 colours from 12. |   |  |
| Name                       | Qty   |  |
| Yellow                     | 1   |  |
| Medium Blue Green          | 1   |  |
| Light Blue                 | 1   |  |
| Fern Green                 | 1   |  |
| Mauve                      | 1   |  |
| Bright Pink                | 1   |  |
| Heavy Frost                | 1   |  |
| No Colour Blue             | 1   |  |
| Chrome Orange              | 1   |  |
| Dark Lavender              | 1   |  |
| Flesh Pink                 | 1   |  |
| Brushed Silk               | 1   |  |
|                            | Name Yellow Medium Blue Green Light Blue Fern Green Mauve Bright Pink Heavy Frost No Colour Blue Chrome Orange Dark Lavender Flesh Pink |  |

#### Saturates Pack

A selection of strong and vibrant colours for more intense colour combinations.

| No. | Name              | Qty |
|-----|-------------------|-----|
| 027 | Medium Red        | 1   |
| 101 | Yellow            | 1   |
| 105 | Orange            | 1   |
| 116 | Medium Blue Green | 1   |
| 120 | Deep Blue         | 1   |
| 126 | Mauve             | 1   |
| 129 | Heavy Frost       | 1   |
| 135 | Deep Golden Amber | 1   |
| 139 | Primary Green     | 1   |
| 181 | Congo Blue        | 1   |
| 182 | Light Red         | 1   |
| 332 | Special Rose Pink | 1   |

#### Studio Pack

A range of technical filters for basic light source control.

| No. | Name                 | Qty |
|-----|----------------------|-----|
| 201 | Full CTB             | 2   |
| 281 | ¾ CTB                | 2   |
| 204 | Full CTO             | 2   |
| 285 | ¾ CTO                | 2   |
| 298 | 0.15 Neutral Density | 1   |
| 209 | 0.3 Neutral Density  | 1   |
| 210 | 0.6 Neutral Density  | 1   |
| 211 | 0.9 Neutral Density  | 1   |

#### Complementary Pack

A starter pack for exploring the basics of colour addition and subtraction.

| No. | Name            | Qty |
|-----|-----------------|-----|
| 164 | Flame Red       | 1   |
| 124 | Dark Green      | 1   |
| 119 | Dark Blue       | 1   |
| 176 | Loving Amber    | 1   |
| 174 | Dark Steel Blue | 1   |
| 138 | Pale Green      | 1   |
| 101 | Yellow          | 1   |
| 115 | Peacock Blue    | 1   |
| 128 | Bright Pink     | 1   |
| 007 | Pale Yellow     | 1   |
| 117 | Steel Blue      | 1   |
| 035 | Light Pink      | 1   |

#### Light Tint Pack

Paler shades to give more subtle effects and to filter white light from the lamp.

| No. | Name              | Qty |
|-----|-------------------|-----|
| 003 | LavenderTint      | 1   |
| 007 | Pale Yellow       | 1   |
| 009 | Pale Amber Gold   | 1   |
| 035 | Light Pink        | 1   |
| 061 | Mist Blue         | 1   |
| 063 | Pale Blue         | 1   |
| 103 | Straw             | 1   |
| 154 | Pale Rose         | 1   |
| 162 | Bastard Amber     | 1   |
| 169 | Lilac Tint        | 1   |
| 213 | White Flame Green | 1   |
| 255 | Hollywood Frost   | 1   |

#### Studio Plus Pack

A range of technical filters for fine control of light sources.

| No. | Name    | Qty |
|-----|---------|-----|
| 202 | ½ CTB   | 2   |
| 203 | 1/4 CTB | 2   |
| 218 | 1/8 CTB | 2   |
| 205 | ½ CTO   | 2   |
| 206 | 1/4 CTO | 2   |
| 223 | 1/8 CTO | 2   |
|     |         |     |

#### Tint Pack

Lighting filters which complement the original Colour Magic pack to create alternative shades.

| No. | Name                | Qty |
|-----|---------------------|-----|
| 002 | Rose Pink           | 1   |
| 048 | Rose Purple         | 1   |
| 088 | Lime Green          | 1   |
| 100 | Spring Yellow       | 1   |
| 108 | English Rose        | 1   |
| 131 | Marine Blue         | 1   |
| 157 | Pink                | 1   |
| 164 | Flame Red           | 1   |
| 174 | Dark Steel Blue     | 1   |
| 228 | Brushed Silk        | 1   |
| 250 | 1/2 White Diffusion | 1   |
| 344 | Violet              | 1   |
|     |                     |     |

#### Arc Correction Pack

A selection of technical filters for colour correction.

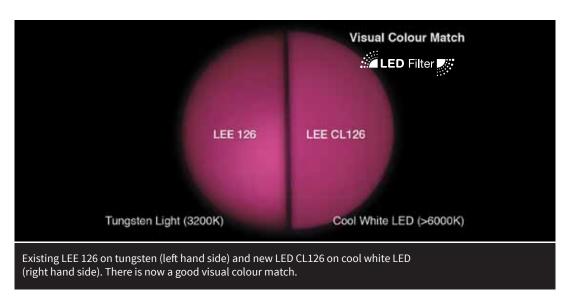
| No. | Name                  | Qty |
|-----|-----------------------|-----|
| 205 | ½ CTO                 | 2   |
| 206 | 1/4 CTO               | 2   |
| 219 | LEE Fluorescent Green | 1   |
| 241 | LEE Fluorescent 5700K | 1   |
| 242 | LEE Fluorescent 4300K | 1   |
| 243 | LEE Fluorescent 3600K | 1   |
| 244 | Full Plus Green       | 2   |
| 245 | ½ Plus Green          | 2   |

## **LED FILTERS**

If there's one problem that lighting designers can relate to, it's the dramatic change in hue that occurs when a coloured filter is placed in front of a cool white LED fitting. And the issue is only exacerbated when combining cool white LED and tungsten light sources, making it almost impossible to match the colours.



With cool white LED systems increasing in use, it became obvious that something had to be done, so the technicians at LEE Filters came up with a solution: the LED Filter range. These filters are designed to produce the same colour on a cool white LED (>6000K) as their tungsten-lighting equivalent. Try to think of them as a range of colour-corrected filters, as opposed to those that are colour temperature corrected.



#### **LED Filters**

## LED COLOUR RANGE



Source: LED >6000K

CL104
Cool LED Deep Amber

Projected Colour

104

For use on cool white LED with C.T. >6000K to produce a pleasing golden yellow. Similar to **LEE 104** on a tungsten lamp.



For use on cool white LED with C.T. >6000K to produce a warm medium amber. Similar to **LEE 105** on a tungsten lamp.

CL106 CL106 Cool LED Primary Red

For use on cool white LED with C.T. >6000K to produce a warm primary red. Similar to **LEE 106** on a tungsten lamp. Good for cycloramas.

CL113 Cool LED Magenta

For use on cool white LED with C.T.>6000K to produce a soft pink red, with strong contrasting shadows. Similar to **LEE 113** on a tungsten lamp.

CL115
Cool LED Peacock Blue

For use on cool white LED with C.T. >6000K to produce a fresh, crisp, spearmint colour. Similar to **LEE 115** on a tungsten lamp. Good for cycloramas.

CL116
Cool LED Medium Blue Green

For use on cool white LED with C.T. >6000K to produce a vibrant turquoise with a green bias. Similar to **LEE 116** on a tungsten lamp.

Filter Colour

CL117

Cool LED Steel Blue

For use on cool white LED with C.T. >6000K to produce a silvery moonlight wash. Similar to **LEE 117** on a tungsten lamp. Good for cycloramas.

CL118
Cool LED Light Blue

For use on cool white LED with C.T.>6000K to produce a cold, spine-chilling blue. Similar to **LEE 118** on a tungsten lamp.

CL119 Cool LED Dark Blue

For use on cool white LED with C.T.>6000K to produce a soft moody blue, good for blacklighting. Similar to **LEE 119** on a tungsten lamp.

CL126 Cool LED Mauve

For use on cool white LED with C.T. >6000K to produce a bold intense pink. Similar to **LEE 126** on a tungsten lamp.

CL128 Cool LED Bright Pink

For use on cool white LED with C.T.>6000K to produce a neon pink good for musicals / pantos. Similar to **LEE 128** on a tungsten lamp.

CL132 Cool LED Medium Blue

For use on cool white LED with C.T.>6000K to produce a mid tone blue good for night scenes. Similar to **LEE 132** on a tungsten lamp.



For use on cool white LED with C.T. >6000K to produce a vivid primary green. Similar to **LEE 139** on a tungsten lamp. Good for cycloramas.



For use on cool white LED with C.T. >6000K to produce a warm key light amber. Similar to **LEE 147** on a tungsten lamp.



For use on cool white LED with C.T. >6000K to produce a sunset-like glow. Similar to **LEE 158** on a tungsten lamp.



For use on cool white LED with C.T.>6000K to produce a dawn burst, orange-red glow. Similar to **LEE 164** on a tungsten lamp.



For use on cool white LED with C.T.>6000K to produce a dance floor pink, good for cycloramas. Similar to **LEE 180** on a tungsten lamp.



For use on cool white LED with C.T.>6000K to produce soft, romantic, mood lighting. Similar to **LEE 181** on a tungsten lamp.



For use on cool white LED with C.T.>6000K to produce a saturated vibrant red, good for cycloramas. Similar to **LEE 182** on a tungsten lamp.

#### **LED Filters**

## **LED CONVERSION FILTERS**

Because the white light emitted from an LED fixture has a strong blue cast, it appears cold when compared with a tungsten white light. In order to overcome this problem, LEE Filters has introduced the LED CTO Filter range (CTO stands for Colour Temperature Orange), which is designed to give the white light from an LED source a more tungsten-like warmth. In effect, the filters take the 5000K to 7000K colour temperature of an LED source and convert them to the appearance of a 3200K tungsten source. This allows lighting designers to mix the two sources without the viewer or camera picking up on any difference.



#### 622

One and One Eighth Digital LED CTO

Converts white LED of 7000K to Tungsten of 3200K Mired shift + 170

#### 624

Full Digital LED CTO

Converts white LED of 6200K to Tungsten of 3200K Mired shift + 151

#### 626

Seven Eighths Digital LED CTO

Converts white LED of 5550K to Tungsten of 3200K Mired shift + 132

#### 628

Three Quarter Digital LED CTO

Converts white LED of 5000K to Tungsten of 3200K Mired shift + 113



## THE DESIGNER SERIES

A VERY SPECIAL RANGE OF LIGHTING FILTERS UNIQUE TO LEE. THE DESIGNER SERIES COLOURS HAVE BEEN CREATED BY SOME OF THE TOP LIGHTING DESIGNERS WORKING IN STAGE, SCREEN, TELEVISION, CINEMA AND ARCHITECTURAL LIGHTING. Nobody knows better than the lighting designers themselves what they need in order to realise their vision. Whether they're recreating the pale, watery hues of a winter sunrise, or the dark, gritty tones of an urban environment, it's essential that the filters are capable of reproducing the vision that is in their mind's eye.

With this in mind, LEE Filters has set about helping the lighting designers to achieve their aims, by involving them at the earliest possible opportunity – the concept stage. Designers are invited to the LEE Filters manufacturing plant in Andover, where they work closely with the team of research and development technicians, blending sometimes myriad dyes in order to create their perfect colour.

Only after the new filter has been tested stringently in the field, is it then launched as part of the Designer Series.

#### **PETER BARNES**



#### \*707 Ultimate Violet

Used in musical performances for general colour washes and set lighting.



#### \*721 Berry Blue

Used in musical performances for rear colour wash or set lighting.



#### \*729 Scuba Blue

Used in musical performances for a rear colour wash or set lighting.



#### \*797 Deep Purple

Used in musical performances for general colour washes and set lighting.

#### **TANYA BURNS**



#### 505 Sally Green

A fresh, light & airy summer green. 'Under tree canopy' light quality without 'pantomime countryside'. Subtle enough to light faces without having to add too much general cover on top.



#### 506 Marlene

Flattering skin tone filter without the comedy 'pink'. Also useful as Indian summer at dusk/sepia type effect.



#### 507 Madge

Denser, saturated orange version of 135 avoiding 'pinky red'. Good for backlight, instruments, part of a sunset palette, and generating a party atmosphere.



#### 508 Midnight Maya

A rich, sultry blue. Like Congo Blue, but allowing greater light transmission so more maintenance friendly - fewer gel changes.



#### 525 Argent Blue

LSI's Silver Anniversary colour sits between 165 and 068 in the range. Great for a foreboding cold winter's night, but allows enough light transmission to be useful for general illluminance too.

#### **LUCY CARTER**



#### 511 Bacon Brown

An intense and warm deep brown. Designed to recreate the pigment browns used by Francis Bacon in some of his paintings.



#### 513 Ice And A Slice

A pale acidic spring yellow. For a sharp white wash.



#### 512 Amber Delight

A dark, dirty orange.



#### 514 Double G & T

Double 513, when only a double will do. Has a more acidic bite.

#### **PAULE CONSTABLE**



#### 731 Dirty Ice

Dirtier than 730 Liberty Green, more orange, sympathetic with skin tones.



#### 742 Bram Brown

Dirtier than 156 Chocolate, good for skin tones. Dims well and doesn't go pink at low light levels.



## 733 Damp Squib

A dirty green, reduces warmth. Good for cross lighting.



#### 768 Egg Yolk Yellow

A bold strong chemical yellow, less orange/red than 179 Chrome Orange.

"I WAS FASCINATED TO LEARN THE PROCESS OF MAKING COLOUR. THE CHANCE TO DEVELOP NEW COLOURS WAS THRILLING; A REAL MEETING OF ART AND SCIENCE. BEING ABLE TO DISCUSS COLOUR IN THAT DETAIL AND FOR LEE TO RESPOND IN SUCH A POSITIVE WAY WAS A UNIQUE EXPERIENCE."

#### **CHRIS DAVEY**

712 Bedford Blue

A smoky warm blue. Good for skin tones.



748 Seedy Pink

A smoky pink. Good for tungsten on skin tones.

722 Bray Blue
A purer blue with very little red in it.

"A BIG THANK YOU FOR A VERY INTERESTING DAY. ALL THE TEAM
AT LEE CLEARLY TAKE GREAT PRIDE IN THEIR PRODUCTS, SHOWN
BY THE RIGOROUS QUALITY CONTROL CHECKS."
Chris Davey

#### **DAVE DAVEY**



#### 701 Provence

The colour of the lavender fields of the south of France. A redder version of 180 Dark Lavender for use on cameras balanced to tungsten sources.



#### 736 Twickenham Green

A powerful green with depth, for music or light



#### 744 Dirty White

Correct a daylight source to an off white tungsten source. Used with a tungsten source provides a dingy effect like a smoky bar.



#### 749 Hampshire Rose

Combines flesh tone warmer 154 Pale Rose with some Hampshire frost.



#### 770 Burnt Yellow

A colour that feels warm and dense on camera, a balance between 179 Chrome Orange and 105 Orange.

#### **CHRIS ELLIS**



#### 714 Elysian Blue

A new deeper version of 197 Alice Blue.



#### 718 Half Shanklin Frost

202 Half CT Blue with frost to soften the beam of profile units.



#### 717 Shanklin Frost

201 Full CT Blue with frost to soften the beam of profile units.



## 798 Chrysalis Pink

A new deeper lavender with a dash of rose blusher.

#### **RICK FISHER**



#### 708 Cool Lavender

For use as a warmer tint without turning yellow and to recreate the colour of fluorescent lighting.



**Rick Fisher** 



#### 728 Steel Green

Approaching storms. Overcast days. Cold steely light. Malevolent moonlight.



#### 735 Velvet Green

A beautiful background colour. Victorian melodrama. A night time green.

#### **PETER FISKER**



#### 700 Perfect Lavender

In-between 170 Deep Lavender and 345 Fuchsia Pink, and is good for backlighting and romantic atmospheres.



## 703 Cold Lavender

A colour that would be great for front / key lighting and that works well with 152 Pale Gold.



#### 727 QFD Blue

A special version of 729 Scuba Blue which is good for backlighting and swimming pool effects.



#### 780 AS Golden Amber

Between 778 Millennium Gold and 135 Deep Golden Amber, but less red, strong and good for backlighting.

#### **HENRIK HAMBRO**

706 King Fals Lavender A cold lavender.

710 Spir Special Blue

A cool industrial blue.

740 Aurora Borealis Green Primary jungle colour. Removes some red and blue. Works best with daylight bulbs. Sodium lamp effect.

"I WOULD LIKE TO THANK LEE FILTERS FOR THE TWO DAYS I SPENT WITH THEIR VERY PROFESSIONAL R&D TEAM. IT WAS GREAT FUN TO PLAY WITH COLOURS AND VERY DIFFICULT TO STOP GETTING NEW IDEAS."

Henrik Hambro

741 Mustard Yellow

Spooky when used in haze. Removes some red and blue. Works best with daylight bulbs. Sodium lamp effect.

773 Cardbox Amber

Warm tint for skin tones.

787 Marius Red

Nice deep full red. Rose leaf colour.

799 Special KH Lavender

A deep lavender that brings out the UV.

#### **MARK HENDERSON**

711 Cold Blue

To give a cold/grey HMI effect from a tungsten source. Will also help blend the light when using both tungsten and HMI sources.

719 Colour Wash Blue

To allow low intensity tungsten to hold a cold/

746 Brown

To give a murky, dirty feel to tungsten. A darker, less pink chocolate.

**777** Rust

A vivid rust colour effect.

789 Blood Red

For a deep saturated red effect. Used when a strong vivid red effect is required.

#### **DAVID HERSEY**

724 Ocean Blue

Useful at low levels of light. Good for dull skies and moonlight.

725 Old Steel Blue

Cool wash, useful for highlights.

763 Wheat

Adds warmth, sunlight.

764 Sun Colour Straw

Adds warmth, bright sunlight.

776 Nectarine

Romantic sunset. Period pieces.

779 Bastard Pink

775 Soft Amber Key 2

Deep sunset. Useful on dark skin tones.

Used for producing a warm key light colour.

#### **JAKOB HOLST**

\*716 Mikkel Blue

A romantic blue to produce a night effect.

774 Soft Amber Key 1

Used for producing a warm key light colour.

<sup>\*</sup> Also available in High Temperature (HT) version

#### **JESPER KONGSHAUG**



#### 730 Liberty Green

A good green for creating mystery and suspense.



#### 765 LEE Yellow

Useful for producing a strong sunlight effect.

#### **ANDY LIDDLE**



#### \*713 J.Winter Blue

A very dark blue with a high UV content. Good when used in high concentrations for a moody and powerful stage colour wash.



#### \*738 JAS Green

A rich yellowish green. Useful as a concert stage wash where darker skin tone, costume and set are a consideration



#### 781 Terry Red

A strong amber red that works well when used against deep reds and dark ambers, in wash combinations and on cycloramas.

"AFTER 20 YEARS IN LIGHTING, I PROMISE TO NEVER THROW A PIECE OF COLOUR ON THE STAGE AGAIN, NOW I KNOW WHAT IT TAKES TO DEVELOP AND MAKE!"

Andy Liddle

#### **DURHAM MARENGHI**



#### 702 Special Pale Lavender

A cold lavender when used with a full tungsten source, but warms as the source is dimmed. Good as a fill for slow sunset fades.



#### **704** Lily

A cool lavender with little red content. Good for romantic evening exteriors.



#### 705 Lily Frost

Smoothes PAR or flood washes of large areas. Useful for houselights and a good colour wash for evening events.

"...I APPRECIATE YOU FINDING THE TIME TO TALK TO DESIGNERS SUCH AS MYSELF ABOUT YOUR PRODUCTS."

Durham Marenghi



#### 720 Durham Daylight Frost

Smoothes PAR or flood washes of large areas. Useful for houselight and good for entrances from natural light.



#### 750 Durham Frost

A frost that almost completely softens shutter edges and removes hot spots.



#### 790 Moroccan Pink

A rich natural pink, good for producing late afternoon



## 791 Moroccan Frost

Smoothes PAR or flood washes of large areas. Useful for houselights and good for interior colour washes.



#### **DECLAN RANDALL**



#### 550 ALD Gold

A 'proper' gold to celebrate the 50th anniversary of the ALD. It maintains its richness as it dims, becoming more molten as the percentage is reduced.



#### 600 Arctic White

A bright, brilliant blue-grey light at 100%. It does not warm up as it dims and is not affected by amber drift. Useful as a backlight or for special effects where a whiter light is called for.



# that has some warmth in it. 603 Moonlight White

602 Platinum

A pleasant white light at full power, dims down to a warm colour and at low intensities has more yellow than red content. Good for sunlight effect as if through stormy clouds reflecting off of the ocean.

At full power produces dazzling grey light with slight red

bias, when dimmed warms up quickly to a useful brown.

Good for effect lighting as well as a cold, white sidelight





#### 601 Silver

A silver-grey light at full power, dims through lavendergrey then warm brown-grey. Works well with 550 ALD Gold. Good for creating a sense of intense darkness on stage whilst still being useful.

#### **MIKE ROBERTSON**

500 Double New Colour Blue

The strongest of the New Colour Blue (NCB) series for dramatic 'white' face and key light where warmer tones than CTB are required.

501 New Colour Blue (Robertson Blue)

An alternative to the CTB series with warmer tones and a lesser green cast for face and key light.

502 Half New Colour Blue

A lighter correction in the NCB series.

503 Quarter New Colour Blue

The lightest correction in the NCB series.

504 Waterfront Green

Designed for period key light and modern urban horizons.

#### **DAVID WHITEHEAD**

709 Electric Lilac

Provides good colour rendering which creates a sharp edge, adding a touch of drama.

767 Oklahoma Yellow

A rich blend of bright sunshine and warm ochre

794 Pretty 'n Pink

Creates warm and soft effects.

**795** Magical Magenta

Rich mixture of red and pinks.

#### **KATE WILKINS**



This is a pure blue, not too green and not too lavender, yet still feels warm for a blue with an early morning feel.

747 Easy White

Primarily developed for fluorescents to ensure warm, comfortable light and flattering skin tones.

#### **PATRICK WOODROFFE**



A deep blue that still has enough transmission to work encouragingly well on television.

\*778 Millennium Gold

Useful for lighting architecture: it produces a rich amber when used on a tungsten source, or a much cooler effect when used on a HMI lamp.



**793** Vanity Fair

A rich glamorous pink, good for use on special occasions.



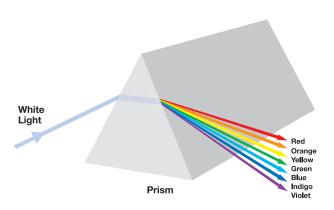
<sup>\*</sup> Also available in High Temperature (HT) version

## THE SCIENCE BEHIND THE ART

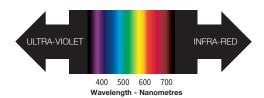
#### Light

Light is energy that travels in wave form. The human eye responds to certain wavelengths and these make up the visible spectrum. Wavelengths outside this spectrum are invisible to us, such as infra red, ultra violet and X-ray.

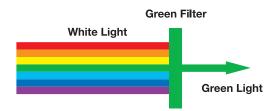
Sir Isaac Newton showed that by shining white light through a glass prism it could be separated back into its different wavelengths.



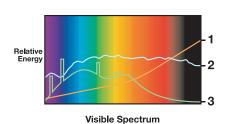
Each wavelength within the visible spectrum is recognised by our eyes as providing a particular colour sensation, the diagram below clearly indicates the visible colours and their corresponding wavelengths. White light consists of all of the visible wavelengths, present in equal amounts.



By using filters to selectively reduce the level of light at certain wavelengths we can create coloured light to meet our individual requirements, whether technical or aesthetic.



Most artificial light sources do not actually produce white light. For example, incandescent sources such as tungsten generate light which has more energy at the red end of the spectrum, whereas a fluorescent source often has spikes of energy mainly in the blue and green region. Filters can be used to correct these differences and make one light source appear like another.



- 1. Tungsten
- 2. Daylight
- 3. Fluorescent

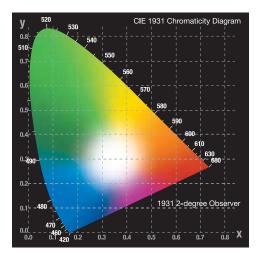
In order to record and communicate colour accurately, you either need to create a physical example of that colour that will never fade or become damaged, or use a mathematical model. A model uses numbers to describe different attributes of a certain colour, these being HUE, SATURATION and LIGHTNESS. The HUE describes the physical colour - red, yellow, green etc. SATURATION is a perception of how strong the hue of the colour is represented in the sample. The LIGHTNESS (or darkness) of a colour is perceived, when a comparison made to a similar area that is not coloured, but lit with the same strength of illumination.

As there are three attributes to a colour, the numbers associated with them in a mathematical model can be thought of as a position in a three dimensional shape, this shape is called a colour space.

The particular colour space used by LEE Filters technicians was devised in 1931 by the Commission International Eclairage (CIE ) and is one of the many internationally recognised standard colour spaces.

## The Science Behind The Art

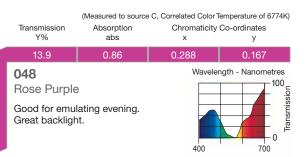
The HUE and SATURATION of any colour can be represented by its position on a chromaticity diagram, as seen below. The diagram contains all visible colours, and all possible densities of these colours, in a two-dimensional configuration, with pale colours in the centre and saturated versions of those same colours at the edges. A colour's position on this diagram will be represented by its Chromaticity Co-ordinates.



#### How to use this brochure.

The technical information contained in this brochure is designed to help you choose the correct colour for your requirements in a number of different ways.

The spectral power distribution (SPD) curves illustrated in this brochure, show the percentage of light at each wavelength across the visible spectrum that is passed when light is shone through the filter. From this data, you can tell which constituent parts of the source will be transmitted, and which will be reduced.



The Y% figure is representative of overall average transmission of that filter, as perceived by the human eye. The Y value is actually one of the TRISTIMULUS VALUES, a set of values unique to each colour, that are calculated mathematically from the data contained in the SPD graph.

The absorption (abs) of a filter is calculated from the Y% value, and is another way of expressing the light-stopping properties of that filter. Abs is a linear scale, so values can be added or subtracted more easily than using Y%.

| Y%   | abs          |
|------|--------------|
| 50   | 0.3 (1 Stop) |
| 25   | 0.6 (2 Stop) |
| 12.5 | 0.9 (3 Stop) |

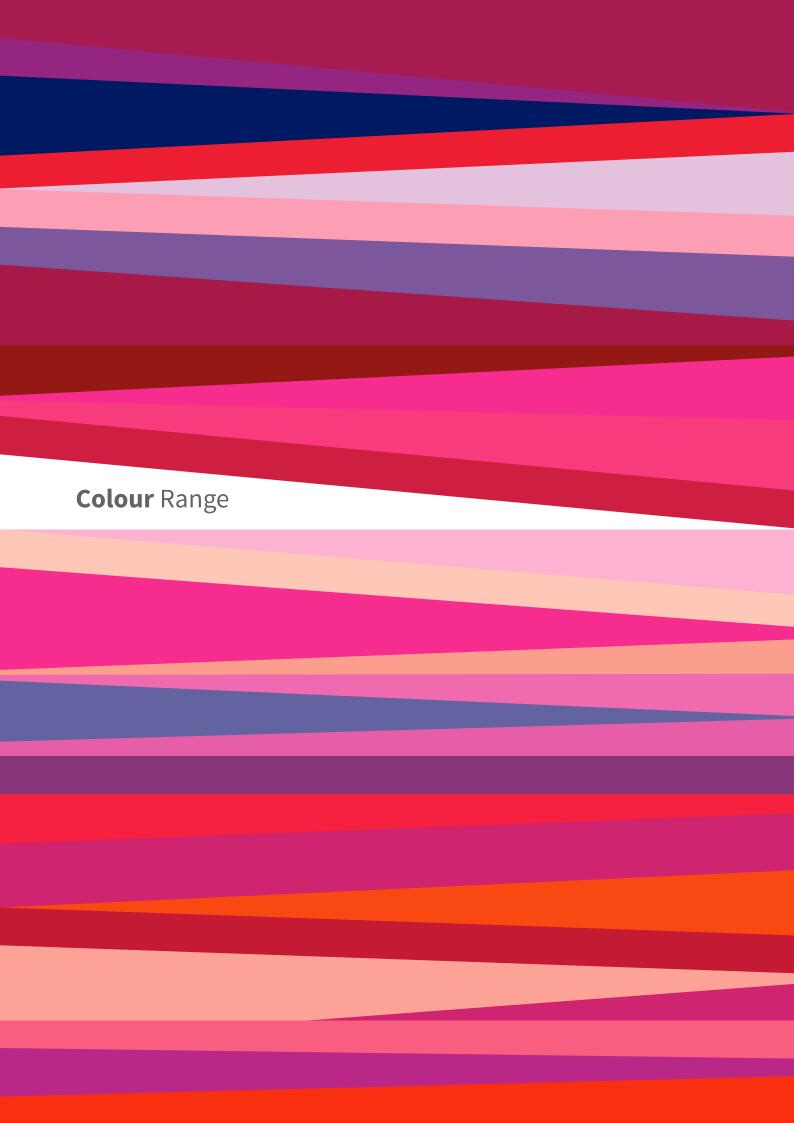
The Chromaticity co-ordinates published for each colour are measured and calculated using a theoretical standard light source, and can be plotted on the chromaticity diagram to establish that particular colour's characteristics in relation to all other colours.

#### **Choosing filter materials**

Since subtractive filters achieve their purpose by absorbing energy, knowing the expected spectral performance of a particular filter and in particular, its overall Transmission Efficiency Y, can help the user to select the materials used, whether being polyester, high temperature polymer or glass.

Each material has recommended temperature limits, and our staff are always happy to advise on the best material for a particular job, and on its durability. The lifetime that may be expected from a particular filter in a particular application can often be difficult to predict, because it depends upon many different factors.

We have many years of experience in a range of different areas, and our staff will readily share the practical knowledge that they have gathered as to how to prolong the lifetime of any particular filter.

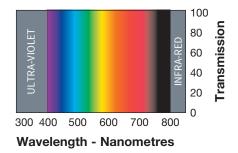


## SPECTRAL CHARTS

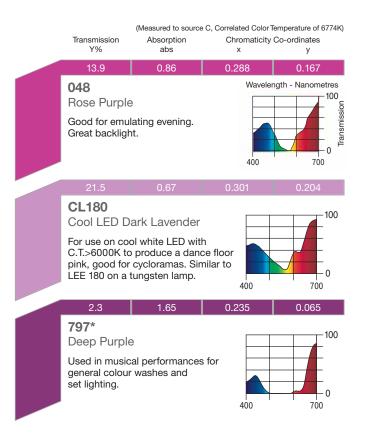
The following pages show a spectral chart and colour sample for each filter within the colour range.

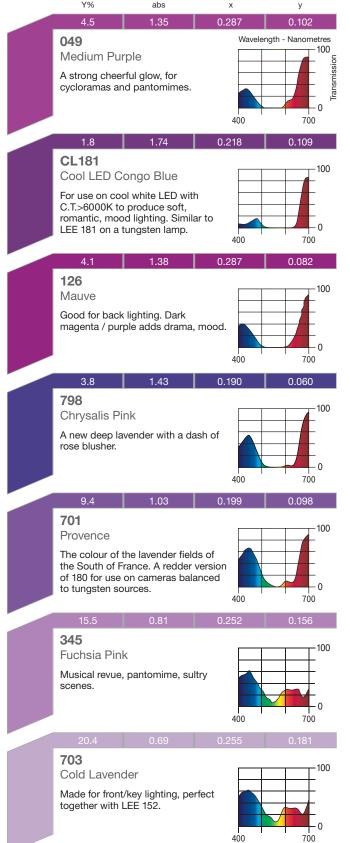
The spectral chart illustrates the percentage of light transmitted by each filter at wavelengths across the visible portion of the electromagnetic spectrum.

The illustration below clearly shows the visible colours represented at these wavelengths.



The colour sample of each filter shows an approximate representation of the colour when tungsten light of 3200K is shone through the filter onto a white surface.





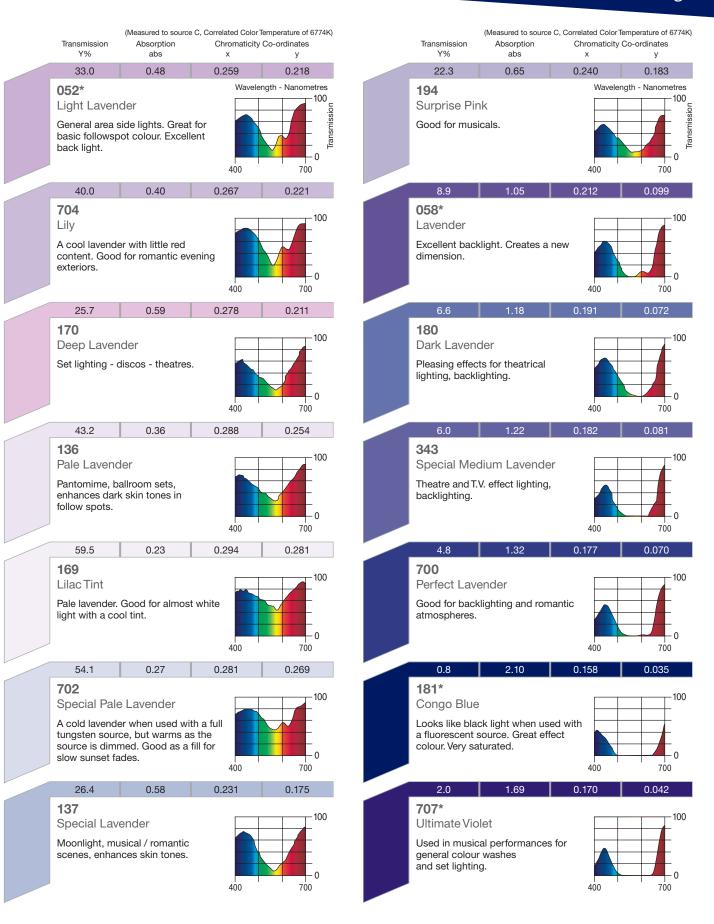
(Measured to source C. Correlated Color Temperature of 6774K)

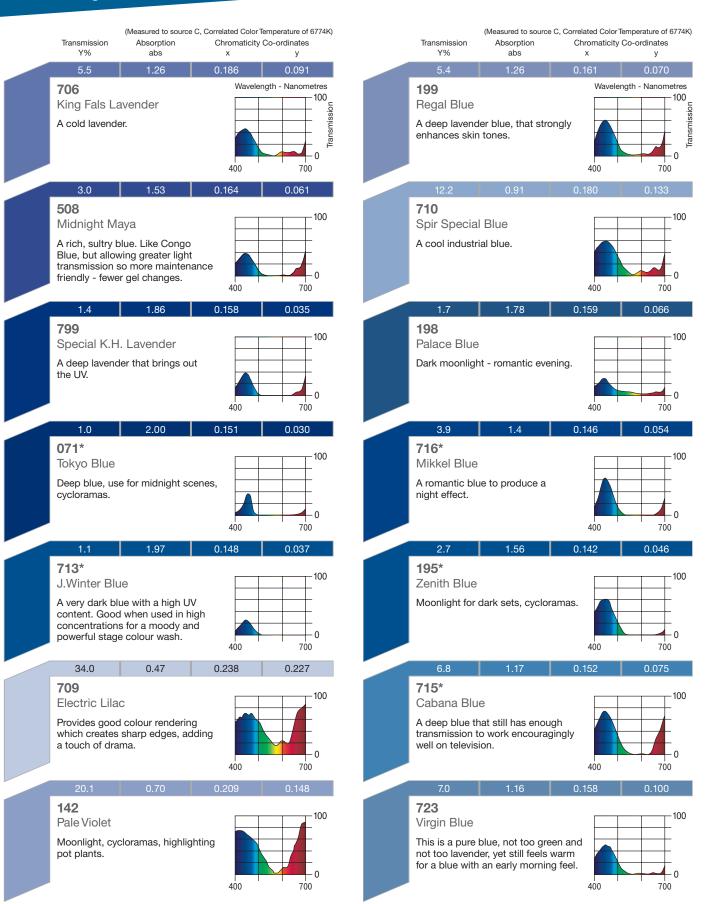
Chromaticity Co-ordinates

Transmission

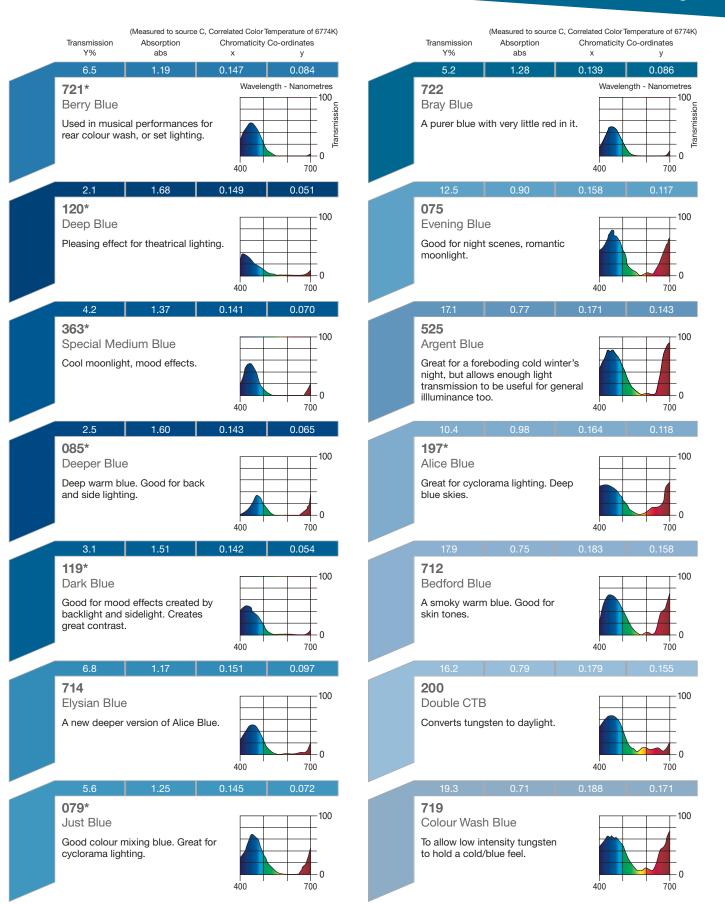
Absorption

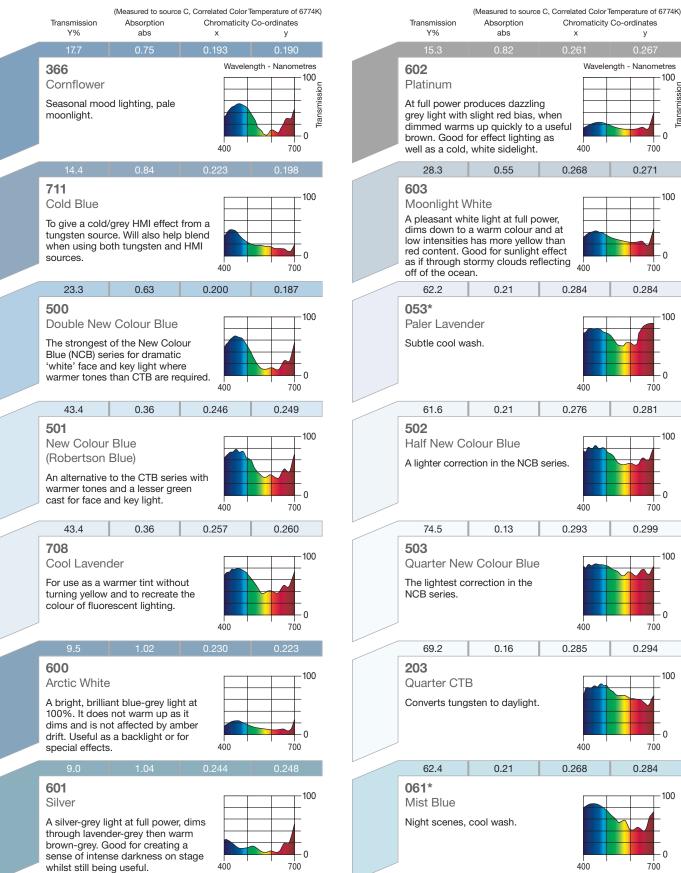
<sup>\*</sup> Also available in High Temperature (HT) version

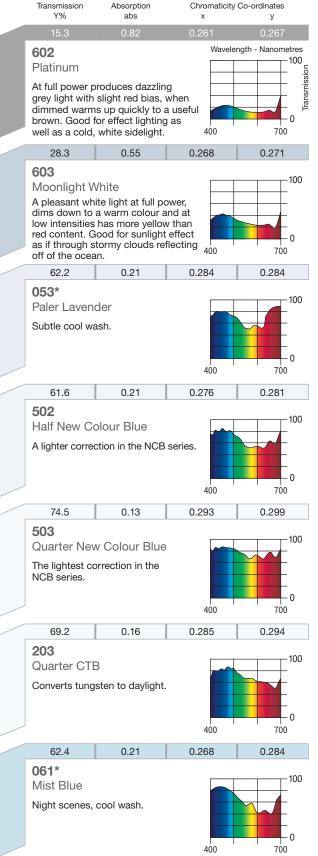




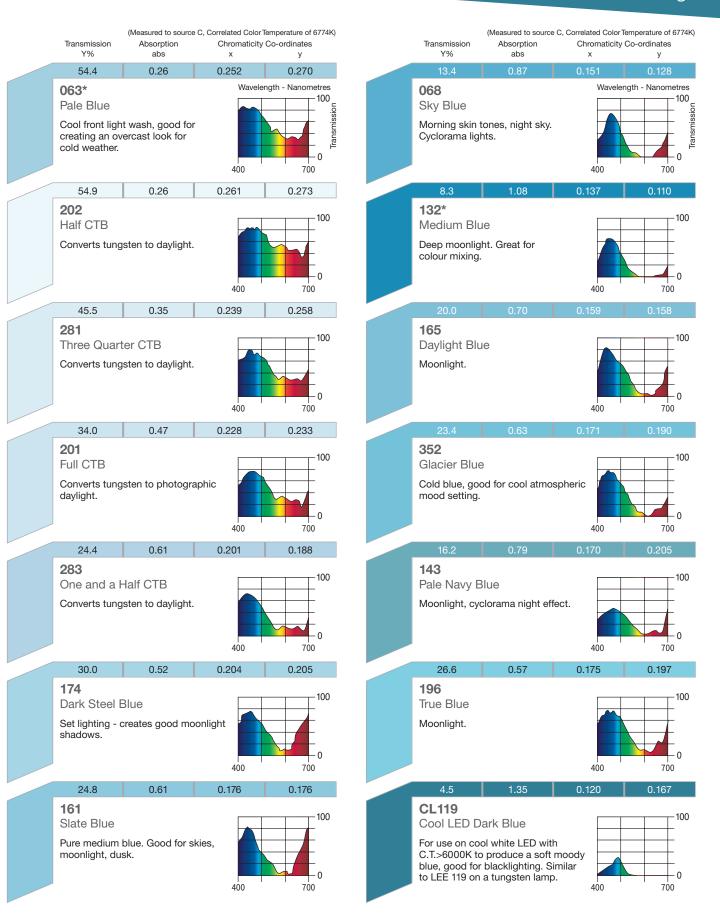
<sup>\*</sup> Also available in High Temperature (HT) version

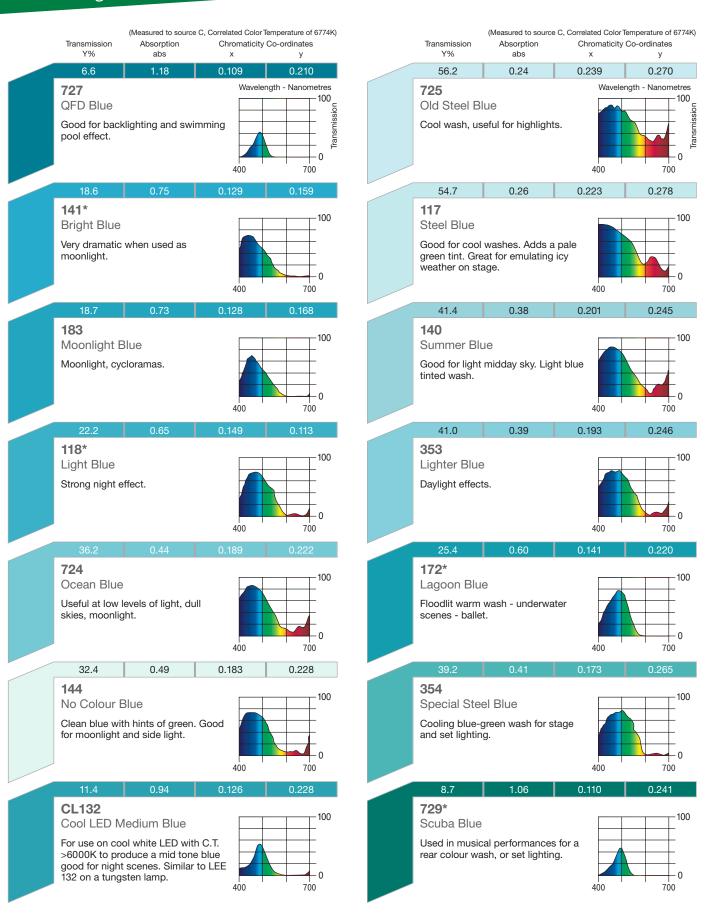




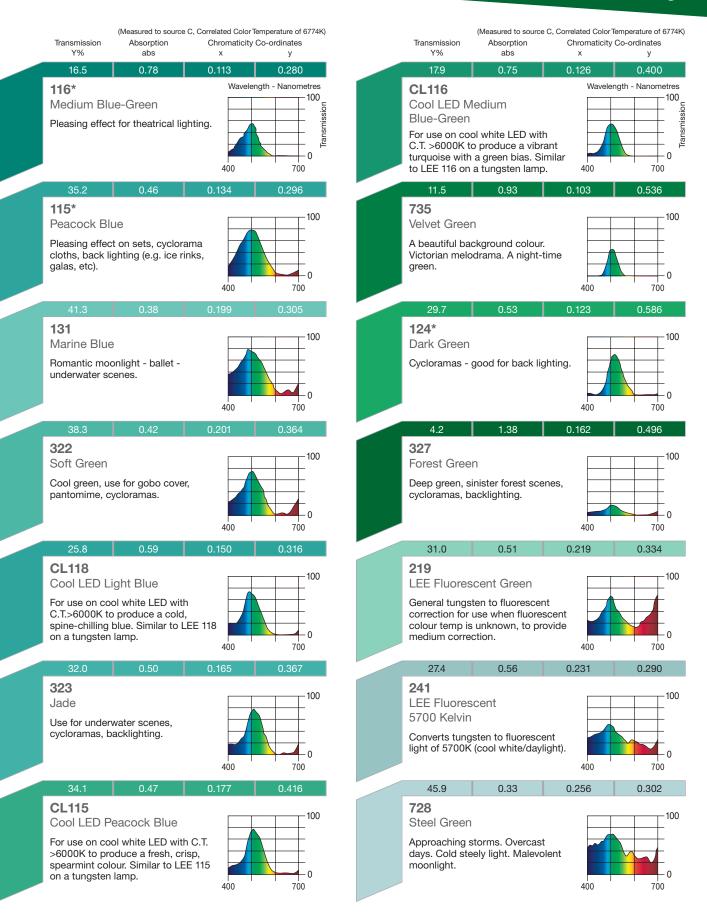


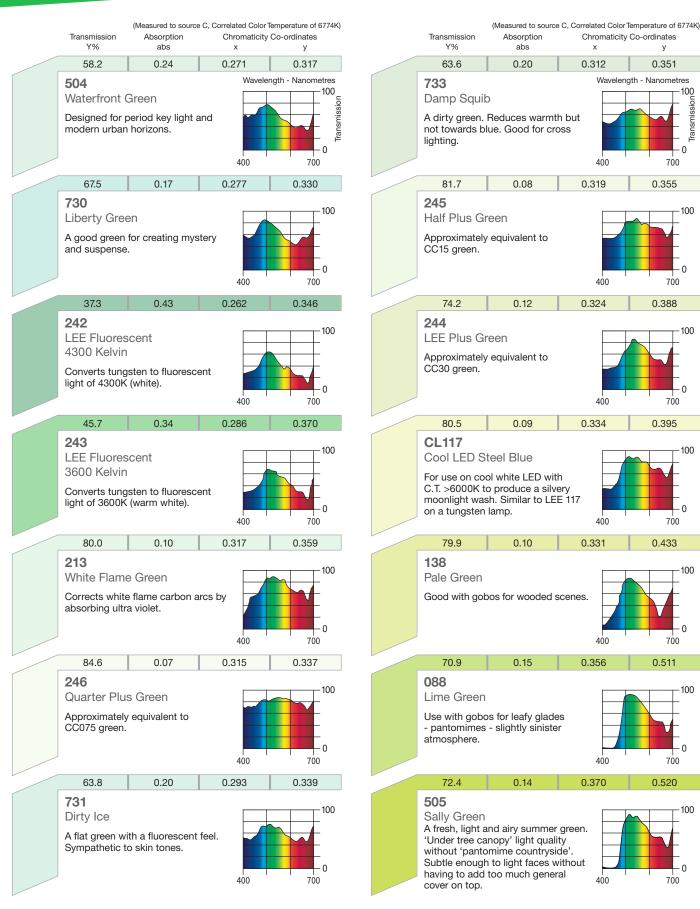
<sup>\*</sup> Also available in High Temperature (HT) version





<sup>\*</sup> Also available in High Temperature (HT) version





0.351

700

700

700

0.395

0.388

0.355

100

100

100

100

0

700

700

700

0.520

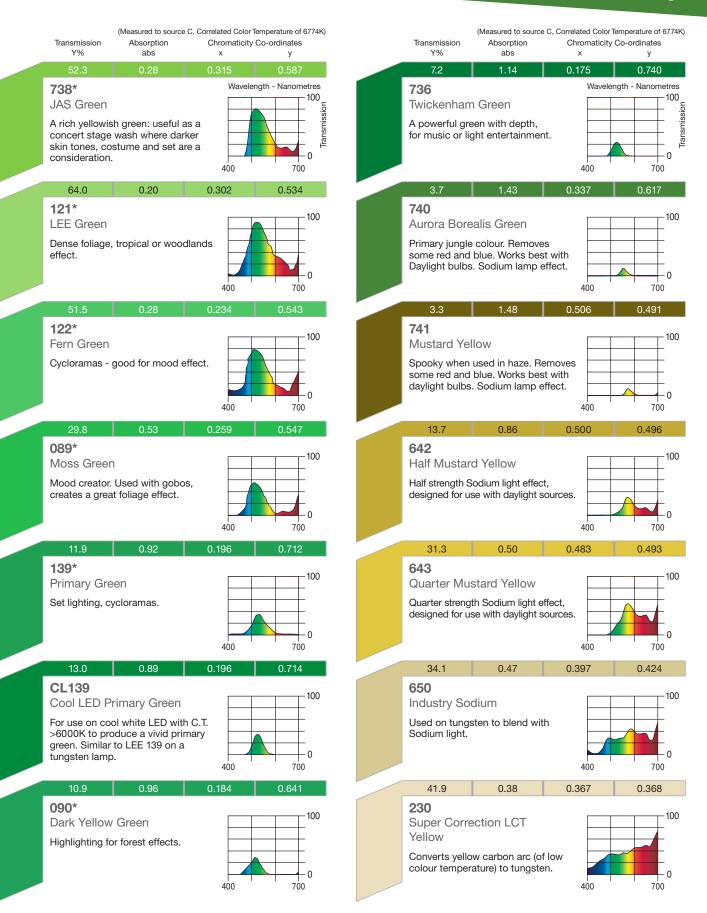
100

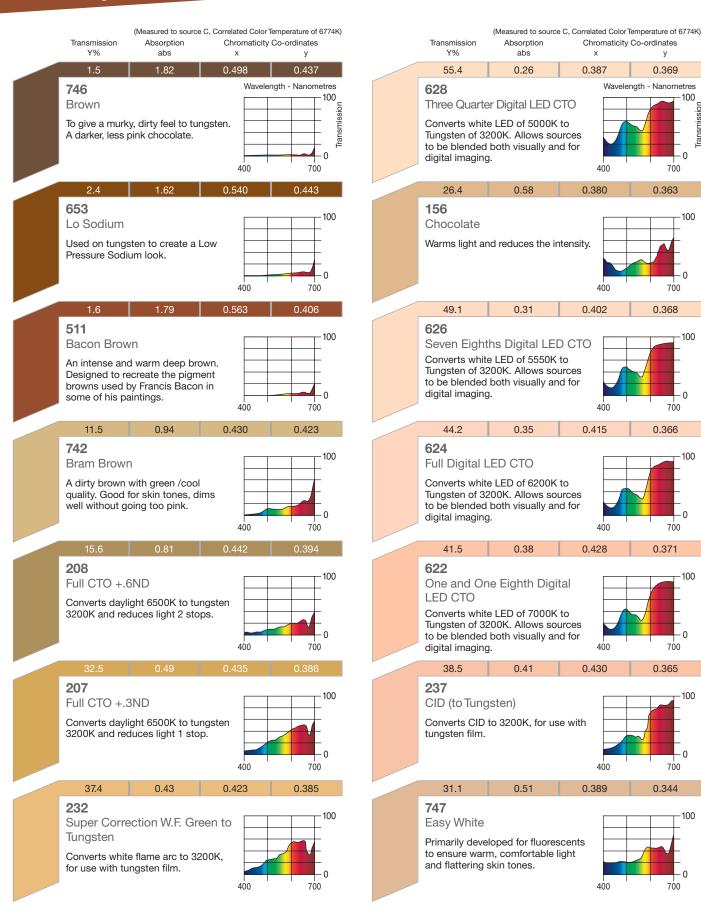
100

0.511

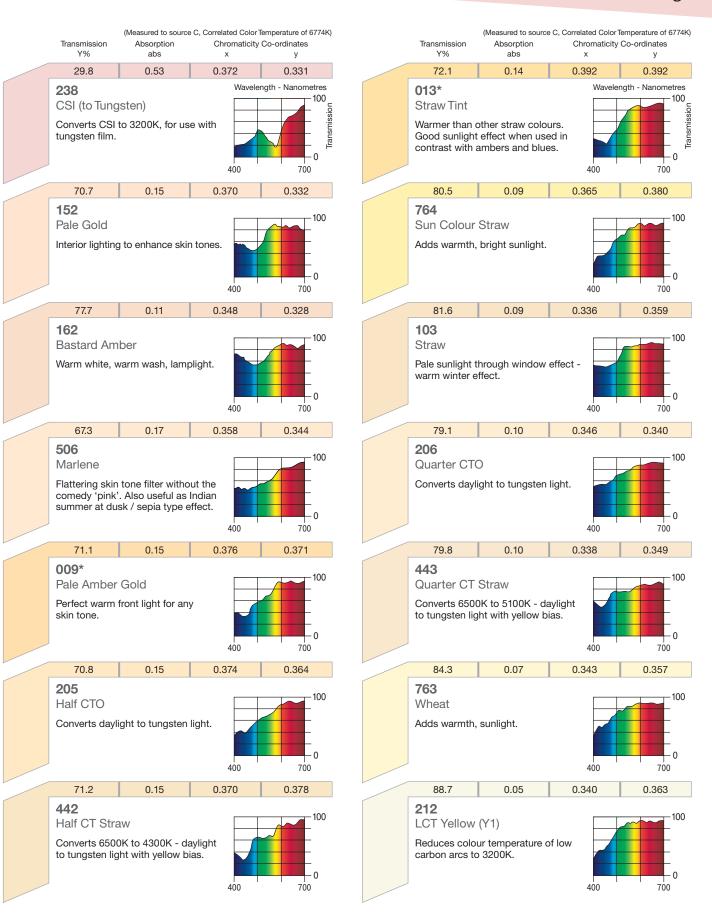
0.433

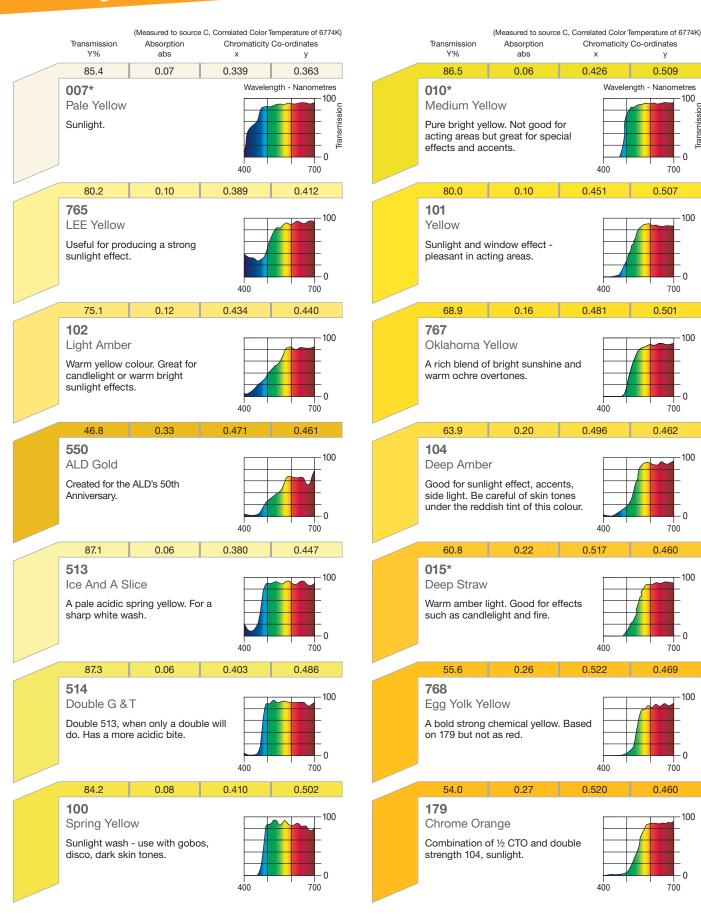
<sup>\*</sup> Also available in High Temperature (HT) version





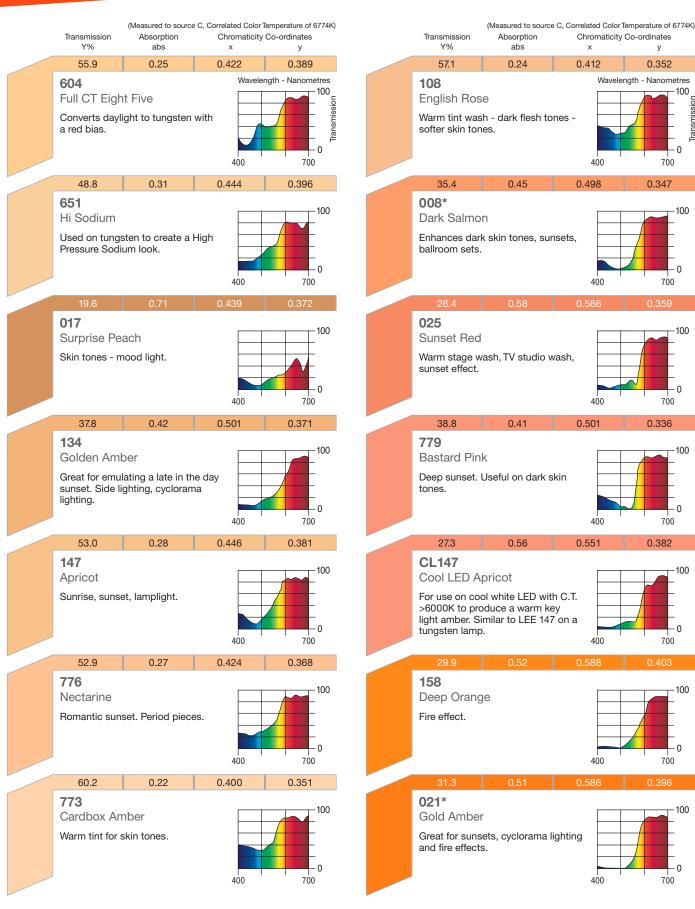
<sup>\*</sup> Also available in High Temperature (HT) version





<sup>\*</sup> Also available in High Temperature (HT) version





Chromaticity Co-ordinates

0.352

700

700

0

- N

700

700

700

700

0.382

700

0.336

100

0.347

Wavelength - Nanometres

0.412

400

400

400

400

400

400

400

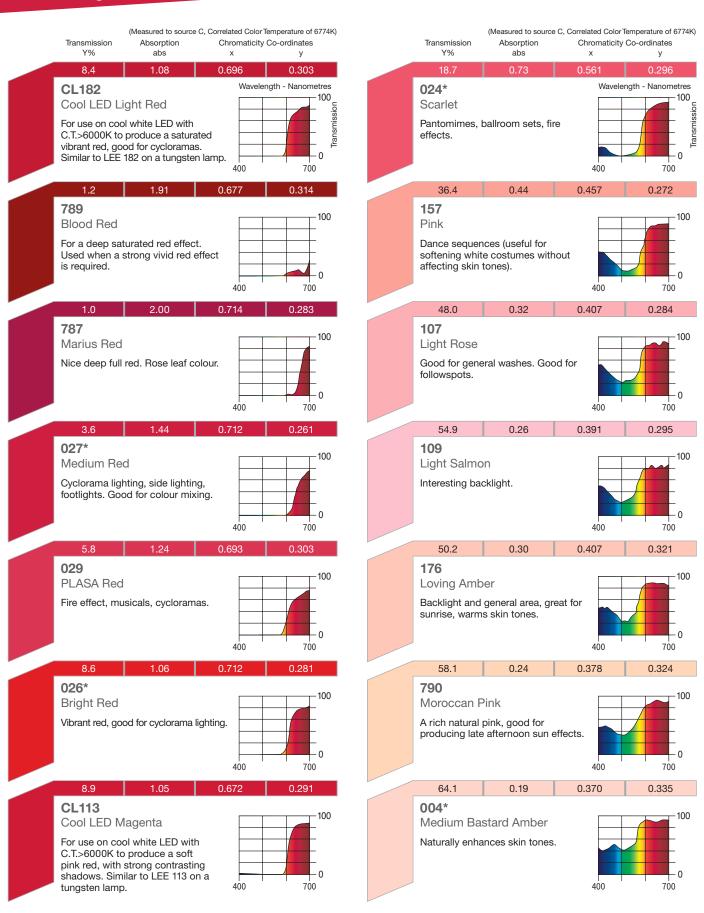
0.551

0.501

0.498

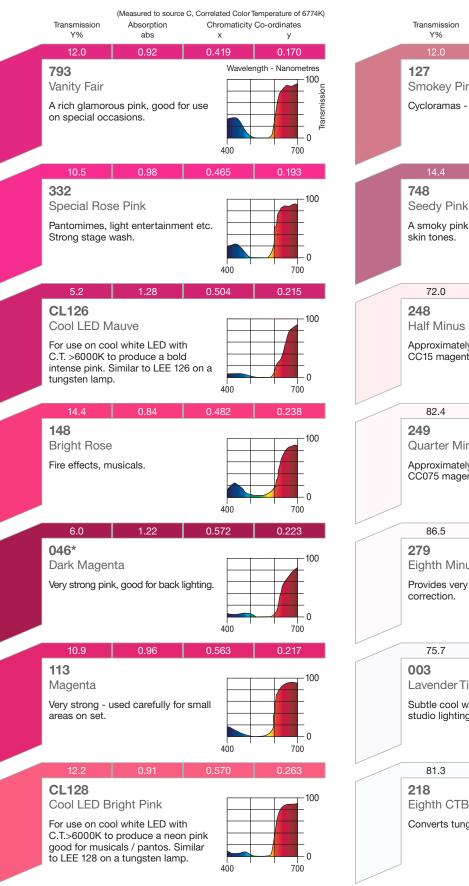
<sup>\*</sup> Also available in High Temperature (HT) version

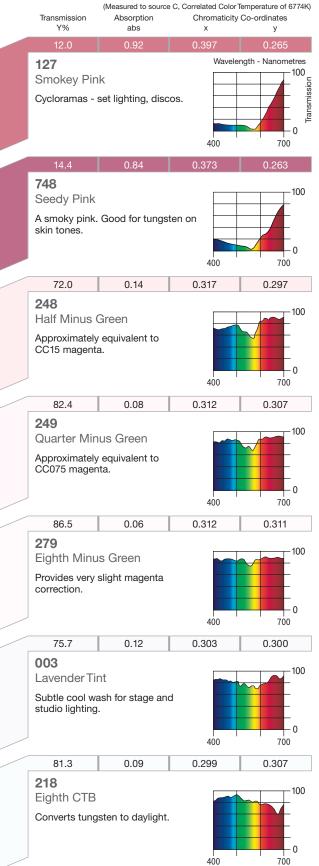




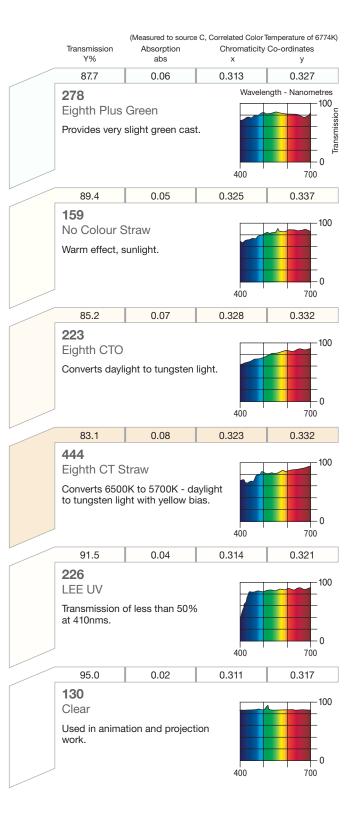
<sup>\*</sup> Also available in High Temperature (HT) version



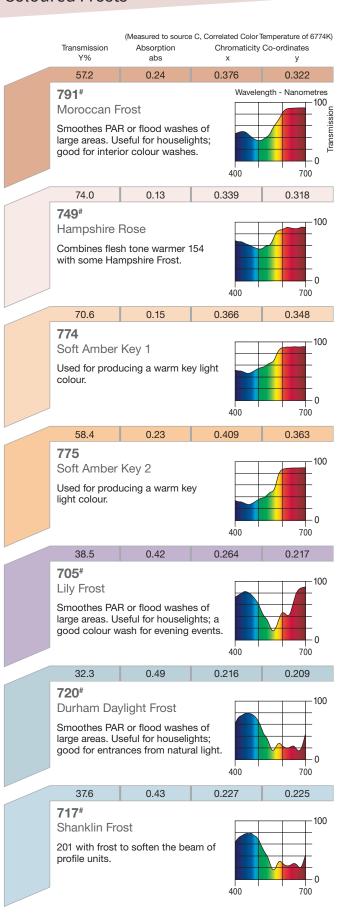


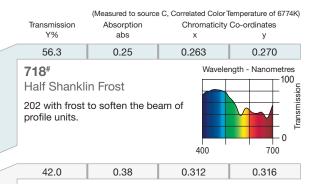


<sup>\*</sup> Also available in High Temperature (HT) version



#### **Coloured Frosts**





221

Blue Frost

Used for soft light effects with the addition of 218.

| 36.0 | 0.44 | 0.312 | 0.317 |
|------|------|-------|-------|
|------|------|-------|-------|

217#

Blue Diffusion

As White Diffusion but with the addition of 218.

| 22.6 | 0.65 | 0.235 | 0.219 |
|------|------|-------|-------|
|------|------|-------|-------|

224#

Daylight Blue Frost

Used for soft light effects with the addition of tungsten correction 201.

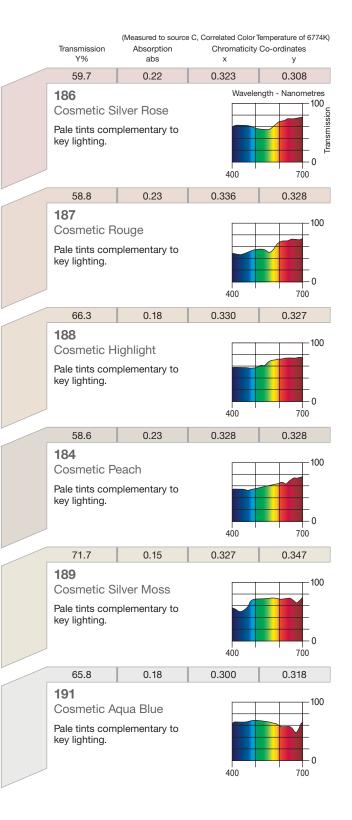
| 25.0 | 0.60 | 0.318 | 0.326 |
|------|------|-------|-------|
|------|------|-------|-------|

225#

Neutral Density Frost

Used for soft light effects with the addition of 0.6 Neutral Density.

# Cosmetic Range



| 002  | Rose Pink            | 075  | Evening Blue      | 129  | Heavy Frost       |
|------|----------------------|------|-------------------|------|-------------------|
| 003  | Lavender Tint        | *079 | Just Blue         | 130  | Clear             |
| *004 | Medium Bastard Amber | *085 | Deeper Blue       | 131  | Marine Blue       |
| *007 | Pale Yellow          | 088  | Lime Green        | *132 | Medium Blue       |
| *008 | Dark Salmon          | *089 | Moss Green        | 134  | Golden Amber      |
| *009 | Pale Amber Gold      | *090 | Dark Yellow Green | 135  | Deep Golden Amber |
| *010 | Medium Yellow        | 100  | Spring Yellow     | 136  | Pale Lavender     |
| *013 | Straw Tint           | 101  | Yellow            | 137  | Special Lavender  |
| *015 | Deep Straw           | 102  | Light Amber       | 138  | Pale Green        |
| 017  | Surprise Peach       | 103  | Straw             | *139 | Primary Green     |
| *019 | Fire                 | 104  | Deep Amber        | 140  | Summer Blue       |
| *020 | Medium Amber         | 105  | Orange            | *141 | Bright Blue       |
| *021 | Gold Amber           | 106  | Primary Red       | 142  | Pale Violet       |
| *022 | Dark Amber           | 107  | Light Rose        | 143  | Pale Navy Blue    |
| *024 | Scarlet              | 108  | English Rose      | 144  | No Colour Blue    |
| 025  | Sunset Red           | 109  | Light Salmon      | 147  | Apricot           |
| *026 | Bright Red           | 110  | Middle Rose       | 148  | Bright Rose       |
| *027 | Medium Red           | 111  | Dark Pink         | 151  | Gold Tint         |
| 029  | Plasa Red            | 113  | Magenta           | 152  | Pale Gold         |
| *035 | Light Pink           | *115 | Peacock Blue      | 153  | Pale Salmon       |
| *036 | Medium Pink          | *116 | Medium Blue-Green | 154  | Pale Rose         |
| *046 | Dark Magenta         | 117  | Steel Blue        | 156  | Chocolate         |
| 048  | Rose Purple          | *118 | Light Blue        | 157  | Pink              |
| 049  | Medium Purple        | *119 | Dark Blue         | 158  | Deep Orange       |
| *052 | Light Lavender       | *120 | Deep Blue         | 159  | No Colour Straw   |
| *053 | Paler Lavender       | *121 | LEE Green         | 161  | Slate Blue        |
| *058 | Lavender             | *122 | Fern Green        | 162  | Bastard Amber     |
| *061 | Mist Blue            | *124 | Dark Green        | 164  | Flame Red         |
| *063 | Pale Blue            | 126  | Mauve             | 165  | Daylight Blue     |
| 068  | Sky Blue             | 127  | Smokey Pink       | 169  | Lilac Tint        |
| *071 | Tokyo Blue           | 128  | Bright Pink       | 170  | Deep Lavender     |

 $<sup>^{\</sup>star}$  Also available in High Temperature (HT) version  $^{\star\star}$  254 available in High Temperature (HT) version only

|      |  |     | 1                                      |       |   |
|------|--|-----|--|-------|---|
| *172 | Lagoon Blue                            | 209 | .3 Neutral Density                     | 247   | LEE Minus Green                             |
| 174  | Dark Steel Blue                        | 210 | .6 Neutral Density                     | 248   | <sup>1</sup> / <sub>2</sub> Minus Green     |
| 176  | Loving Amber                           | 211 | .9 Neutral Density                     | 249   | <sup>1</sup> / <sub>4</sub> Minus Green     |
| 179  | Chrome Orange                          | 212 | LCT Yellow                             | 250   | <sup>1</sup> / <sub>2</sub> White Diffusion |
| 180  | Dark Lavender                          | 213 | White Flame Green                      | 251   | <sup>1</sup> / <sub>4</sub> White Diffusion |
| *181 | Congo Blue                             | 214 | Full Tough Spun                        | 252   | <sup>1</sup> /8 White Diffusion             |
| 182  | Light Red                              | 215 | <sup>1</sup> / <sub>2</sub> Tough Spun | 253   | Hampshire Frost                             |
| 183  | Moonlight Blue                         | 216 | White Diffusion                        | **254 | New Hampshire Frost                         |
| 184  | Cosmetic Peach                         | 217 | Blue Diffusion                         | 255   | Hollywood Frost                             |
| 186  | Cosmetic Silver Rose                   | 218 | 1/8 CT Blue                            | 256   | <sup>1</sup> / <sub>2</sub> Hampshire Frost |
| 187  | Cosmetic Rouge                         | 219 | LEE Fluorescent Green                  | 257   | <sup>1</sup> / <sub>4</sub> Hampshire Frost |
| 188  | Cosmetic Highlight                     | 220 | White Frost                            | 258   | <sup>1</sup> /8 Hampshire Frost             |
| 189  | Cosmetic Silver Moss                   | 221 | Blue Frost                             | 261   | Tough Spun FR - Full                        |
| 191  | Cosmetic Aqua Blue                     | 223 | <sup>1</sup> / <sub>8</sub> CT Orange  | 262   | Tough Spun FR - 3/4                         |
| 192  | Flesh Pink                             | 224 | Daylight Blue Frost                    | 263   | Tough Spun FR - 1/2                         |
| 194  | Surprise Pink                          | 225 | LEE N.D. Frost                         | 264   | Tough Spun FR - 3/8                         |
| *195 | Zenith Blue                            | 226 | LEE U.V.                               | 265   | Tough Spun FR - 1/4                         |
| 196  | True Blue                              | 228 | Brushed Silk                           | 269   | LEE Heat Shield                             |
| *197 | Alice Blue                             | 229 | <sup>1</sup> /4 Tough Spun             | 270   | LEE Scrim                                   |
| 198  | Palace Blue                            | 230 | Super Correction<br>LCT Yellow         | 271   | Mirror Silver                               |
| 199  | Regal Blue                             | 232 | Super White Flame Green                | 272   | Soft Gold Reflector                         |
| 200  | Double CT Blue                         | 236 | H.M.I (To Tungsten)                    | 273   | Soft Silver Reflector                       |
| 201  | Full CT Blue                           | 237 | C.I.D. (To Tungsten)                   | 274   | Mirror Gold                                 |
| 202  | <sup>1</sup> / <sub>2</sub> CT Blue    | 238 | C.S.I. (To Tungsten)                   | 275   | Black Scrim                                 |
| 203  | 1/4 CT Blue                            | 239 | Polariser                              | 278   | <sup>1</sup> /8 Plus Green                  |
| 204  | Full CT Orange                         | 241 | LEE Fluorescent 5700 K                 | 279   | <sup>1</sup> / <sub>8</sub> Minus Green     |
| 205  | <sup>1</sup> / <sub>2</sub> CT Orange  | 242 | LEE Fluorescent 4300 K                 | 280   | Black Foil                                  |
| 206  | <sup>1</sup> / <sub>4</sub> CT Orange  | 243 | LEE Fluorescent 3600 K                 | 281   | <sup>3</sup> / <sub>4</sub> CT Blue         |
|      | Full CT Orange +                       | 244 | LEE Plus Green                         | 283   | 1 ½ CT Blue                                 |
| 207  | .3 Neutral Density                     | 245 | <sup>1</sup> /2 Plus Green             | 285   | <sup>3</sup> / <sub>4</sub> CT Orange       |
| 208  | Full CT Orange +<br>.6 Neutral Density | 246 | <sup>1</sup> /4 Plus Green             | 286   | 1 ½ CT Orange                               |
|      | -                                      |     |  |       |   |

| 287  | Double CT Orange                | 442 | <sup>1</sup> / <sub>2</sub> CT Straw        | 626     | Seven Eighths Digital<br>LED CTO |
|------|---------------------------------|-----|---|---------|----------------------------------|
| 298  | .15 Neutral Density             | 443 | <sup>1</sup> / <sub>4</sub> CT Straw        | 628     | Three Quarter Digital            |
| 299  | 1.2 Neutral Density             | 444 | <sup>1</sup> / <sub>8</sub> CT Straw        |         | LED CTO                          |
| 322  | Soft Green                      | 450 | <sup>3</sup> / <sub>8</sub> White Diffusion | 642     | Half Mustard Yellow              |
| 323  | Jade                            | 452 | <sup>1</sup> /16 White Diffusion            | 643     | Quarter Mustard Yellow           |
| 327  | Forest Green                    | 460 | Quiet Grid Cloth                            | 650     | Industry Sodium                  |
| 328  | Follies Pink                    | 462 | Quiet Light Grid Cloth                      | 651     | Hi Sodium                        |
| 332  | Special Rose Pink               | 464 | Quiet <sup>1</sup> /4 Grid Cloth            | 652<br> | Urban Sodium                     |
| 343  | Special Medium Lavender         | 500 | Double New Colour Blue                      | 653     | Lo Sodium                        |
| 345  | Fuchsia Pink                    | 501 | New Colour Blue<br>(Robertson Blue)         | 700     | Perfect Lavender                 |
| 352  | Glacier Blue                    | 502 | Half New Colour Blue                        | 701     | Provence                         |
| 353  | Lighter Blue                    | 503 | Quarter New Colour Blue                     | 702     | Special Pale Lavender            |
| 354  | Special Steel Blue              | 504 | Waterfront Green                            | 703     | Cold Lavender                    |
| *363 | Special Medium Blue             | 505 | Sally Green                                 | 704     | Lily                             |
| 366  | Cornflower                      | 506 | Marlene                                     | 705     | Lily Frost                       |
| 400  | LEELux                          | 507 | Madge                                       | 706     | King Fals Lavender               |
| 402  | Soft Frost                      | 508 | Midnight Maya                               | *707    | Ultimate Violet                  |
| 404  | Half Soft Frost                 | 511 | Bacon Brown                                 | 708     | Cool Lavender                    |
| 410  | Opal Frost                      | 512 | Amber Delight                               | 709     | Electric Lilac                   |
| 414  | Highlight                       | 513 | Ice And A Slice                             | 710     | Spir Special Blue                |
| 414P | Perforated Highlight            | 514 | Double G & T                                | 711     | Cold Blue                        |
| 416  | 3/4 White Diffusion             | 525 |   | 712     | Bedford Blue                     |
|      |                                 | 550 | Argent Blue ALD Gold                        | *713    | J.Winter Blue                    |
| 420  | Light Opal Frost                |     |   | 714     | Elysian Blue                     |
| 429  | Quiet Frost                     | 600 | Arctic White                                | *715    | Cabana Blue                      |
| 430  | Grid Cloth                      | 601 | Silver                                      | *716    | Mikkel Blue                      |
| 432  | Light Grid Cloth                | 602 | Platinum                                    | 717     | Shanklin Frost                   |
| 434  | 1/4 Grid Cloth                  | 603 | Moonlight White                             | 718     | Half Shanklin Frost              |
| 439  | Heavy Quiet Frost               | 604 | Full CT Eight Five                          | 719     | Colour Wash Blue                 |
| 439P | Perforated Heavy<br>Quiet Frost | 622 | One And Eighth Digital<br>LED CTO           | 720     | Durham Daylight Frost            |
| 441  | Full CT Straw                   | 624 | Full Digital LED CTO                        | *721    | Berry Blue                       |

<sup>\*</sup> Also available in High Temperature (HT) version

| 722  | Bray Blue             |
|------|-----------------------|
| 723  | Virgin Blue           |
| 724  | Ocean Blue            |
| 725  | Old Steel Blue        |
| 727  | QFD Blue              |
| 728  | Steel Green           |
| *729 | Scuba Blue            |
| 730  | Liberty Green         |
| 731  | Dirty Ice             |
| 733  | Damp Squib            |
| 735  | Velvet Green          |
| 736  | Twickenham Green      |
| *738 | Jas Green             |
| 740  | Aurora Borealis Green |
| 741  | Mustard Yellow        |
| 742  | Bram Brown            |
| 744  | Dirty White           |
| 746  | Brown                 |
| 747  | Easy White            |
| 748  | Seedy Pink            |
| 749  | Hampshire Rose        |
| 750  | Durham Frost          |
| 763  | Wheat                 |
| 764  | Sun Colour Straw      |
| 765  | LEE Yellow            |
| 767  | Oklahoma Yellow       |
| 768  | Egg Yolk Yellow       |
| 770  | Burnt Yellow          |
| 773  | Cardbox Amber         |
| 774  | Soft Amber Key 1      |
| 775  | Soft Amber Key 2      |

| 776  | Nectarine           |
|------|---------------------|
| 777  | Rust                |
| *778 | Millennium Gold     |
| 779  | Bastard Pink        |
| 780  | AS Golden Amber     |
| 781  | Terry Red           |
| 787  | Marius Red          |
| 789  | Blood Red           |
| 790  | Moroccan Pink       |
| 791  | Moroccan Frost      |
| 793  | Vanity Fair         |
| 794  | Pretty 'N Pink      |
| 795  | Magical Magenta     |
| *797 | Deep Purple         |
| 798  | Chrysalis Pink      |
| 799  | Special KH Lavender |
|      |                     |
|      | Cool LED Deep Ambe  |

| 795   | Magical Magenta               |
|-------|-------------------------------|
| *797  | Deep Purple                   |
| 798   | Chrysalis Pink                |
| 799   | Special KH Lavender           |
|       |                               |
|       | Cool LED Deep Amber           |
| CL105 | Cool LED Orange               |
| CL106 | Cool LED Primary Red          |
| CL113 | Cool LED Magenta              |
| CL115 | Cool LED Peacock Blue         |
| CL116 | Cool LED Medium<br>Blue-Green |
| CL117 | Cool LED Steel Blue           |
| CL118 | Cool LED Light Blue           |
| CL119 | Cool LED Dark Blue            |
| CL126 | Cool LED Mauve                |
| CL128 | Cool LED Bright Pink          |
| CL132 | Cool LED Medium Blue          |
| CL139 | Cool LED Primary Green        |
| CL147 | Cool LED Apricot              |
|       |                               |

| CL158 | Cool LED Deep Orange   |
|-------|------------------------|
| CL164 | Cool LED Flame Red     |
| CL180 | Cool LED Dark Lavender |
| CL181 | Cool LED Congo Blue    |
| CL182 | Cool LED Light Red     |
|       |                        |

| A205 | Half CTO        |
|------|-----------------|
| A207 | Full CTO + .3ND |
| A208 | Full CTO + .6ND |
| A209 | .3ND            |
| A210 | .6ND            |
| A211 | .9ND            |

## **Technical Filters**



# **TECHNICAL FILTERS**

IN ADDITION TO OUR BROAD RANGE OF LIGHTING FILTER, WE ALSO PRODUCE THE HIGHEST QUALITY CAMERA FILTERS IN BOTH RESIN AND POLYESTER.

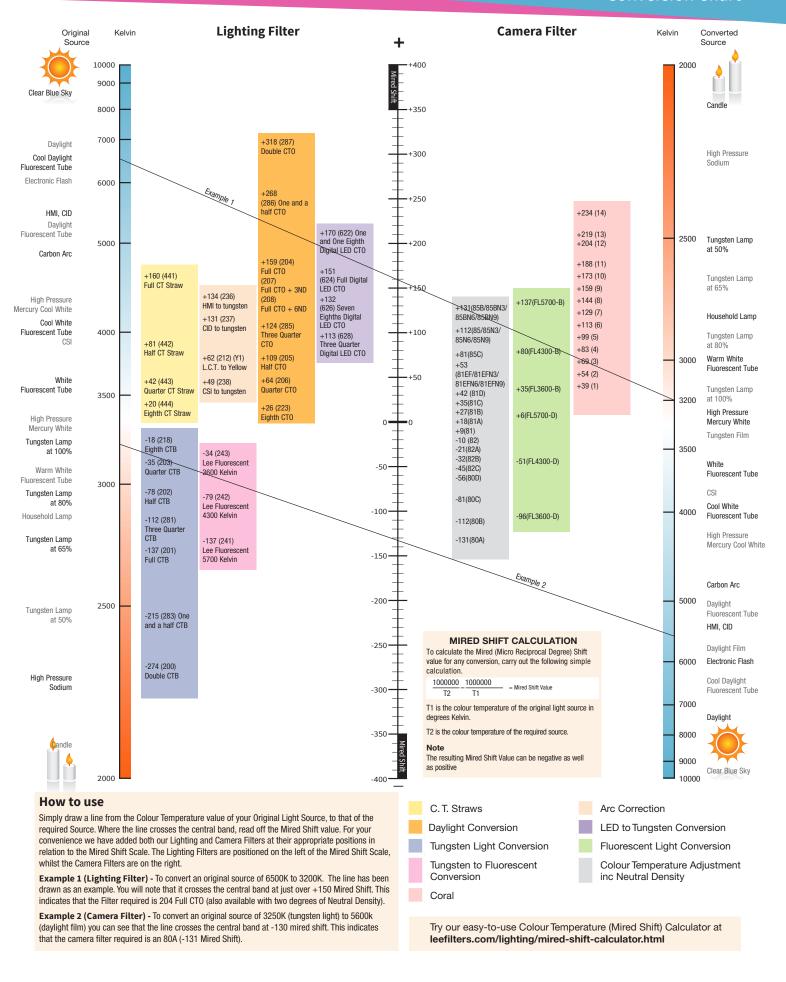


Lighting specialists are faced with innumerable problems to solve in the course of a shoot or project. The LEE range of technical filters is designed to make life a little easier, and features daylight, tungsten and fluorescent conversions, along with neutral densities, diffusers, reflectors and scrims.

| Conversion Chart   | 53    |
|--------------------|-------|
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A TOUCH OF ART, A LOT OF SCIENCE.

### **Conversion Chart**



# Conversion

| Tungsten to Daylight    |   | Kelvin                       | (Measu<br>Mired<br>Shift |      |      | Color Tempera<br>Chromaticity<br>X | ,     |
|-------------------------|---|------------------------------|--------------------------|------|------|------------------------------------|-------|
| 200 Double CTB          | Converts Tungsten to Daylight.  | 3200K to<br>26000K<br>approx | -274                     | 16.2 | 0.79 | 0.179                              | 0.155 |
| 283 One and a Half CTB  | Converts Tungsten to Daylight.  | 3200K to<br>8888K            | -200                     | 24.4 | 0.61 | 0.201                              | 0.188 |
| 201 Full CTB            | Converts Tungsten to Photographic Daylight.<br>Also available as Wide Roll. | 3200K to<br>5700K            | -137                     | 34.0 | 0.47 | 0.228                              | 0.233 |
| 281 Three Quarter CTB   | Converts Tungsten to Daylight.  | 3200K to<br>5000K            | -112                     | 45.5 | 0.35 | 0.239                              | 0.258 |
| 202 Half CTB            | Converts Tungsten to Daylight.  | 3200K to<br>4300K            | -78                      | 54.9 | 0.26 | 0.261                              | 0.273 |
| 203 Quarter CTB         | Converts Tungsten to Daylight.  | 3200K to<br>3600K            | -35                      | 69.2 | 0.16 | 0.285                              | 0.294 |
| 218 Eighth CTB          | Converts Tungsten to Daylight.  | 3200K to<br>3400K            | -18                      | 81.3 | 0.09 | 0.299                              | 0.307 |
| Tungsten to Fluorescent |   |                              |                          |      |      |                                    |       |

| 241 LEE Fluorescent 5700 Kelvin | Converts Tungsten to Fluorescent light of 5700K (cool white/daylight).                 | 27.4 | 0.56 | 0.231 | 0.290 |
|---------------------------------|--|------|------|-------|-------|
| 242 LEE Fluorescent 4300 Kelvin | Converts Tungsten to Fluorescent light of 4300K (white).                               | 37.3 | 0.43 | 0.262 | 0.346 |
| 243 LEE Fluorescent 3600 Kelvin | Converts Tungsten to Fluorescent light of 3600K (warm white).                          | 45.7 | 0.34 | 0.286 | 0.370 |
| 219 LEE Fluorescent Green       | General Tungsten to Fluorescent correction for use when colour temperature is unknown. | 31.0 | 0.51 | 0.219 | 0.334 |

# Daylight to Tungsten

| 287 Double CTO         | Converts Daylight to Tungsten Light.                     | 6500K to<br>2147K | +312 | 40.9 | 0.39 | 0.514 | 0.424 |
|------------------------|--|-------------------|------|------|------|-------|-------|
| 286 One and a Half CTO | Converts Daylight to Tungsten Light.                     | 6500K to<br>2507K | +245 | 48.2 | 0.32 | 0.478 | 0.422 |
| 204 Full CTO           | Converts Daylight to Tungsten Light.                     | 6500K to<br>3200K | +159 | 55.4 | 0.26 | 0.437 | 0.392 |
| 207 Full CTO +.3ND     | Converts Daylight to Tungsten and reduces light 1 Stop.  | 6500K to<br>3200K | +159 | 32.5 | 0.49 | 0.435 | 0.386 |
| 208 Full CTO +.6ND     | Converts Daylight to Tungsten and reduces light 2 Stops. | 6500K to<br>3200K | +159 | 15.6 | 0.81 | 0.442 | 0.394 |
| 285 Three Quarter CTO  | Converts Daylight to Tungsten Light.                     | 6500K to<br>3600K | +124 | 61.3 | 0.21 | 0.400 | 0.387 |
| 205 Half CTO           | Converts Daylight to Tungsten Light.                     | 6500K to<br>3800K | +109 | 70.8 | 0.15 | 0.374 | 0.364 |
| 206 Quarter CTO        | Converts Daylight to Tungsten Light.                     | 6500K to<br>4600K | +64  | 79.1 | 0.10 | 0.346 | 0.346 |

# Conversion

|                        |   | Kelvin            | Mired<br>Shift | Transmission<br>Y% | Absorption<br>abs | Chromaticity<br>x | Co-ordinate<br>y |
|------------------------|---|-------------------|----------------|--------------------|-------------------|-------------------|------------------|
| 223 Eighth CTO         | Converts Daylight to Tungsten Light.                  | 6500K to<br>5550K | +26            | 85.2               | 0.07              | 0.328             | 0.332            |
| 604 Full CT Eight Five | Converts Daylight to Tungsten with a red bias.        | 6500K to<br>3200K | +159           | 55.9               | 0.25              | 0.422             | 0.389            |
| 441 Full CT Straw      | Converts Daylight to Tungsten Light with yellow bias. | 6500K to<br>3200K | +160           | 57.3               | 0.24              | 0.426             | 0.407            |
| 442 Half CT Straw      | Converts Daylight to Tungsten Light with yellow bias. | 6500K to<br>4300K | +81            | 71.2               | 0.15              | 0.370             | 0.378            |
| 443 Quarter CT Straw   | Converts Daylight to Tungsten Light with yellow bias. | 6500K to<br>5100K | +42            | 79.8               | 0.10              | 0.338             | 0.349            |
| 444 Eighth CT Straw    | Converts Daylight to Tungsten Light with yellow bias. | 6500K to<br>5700K | +20            | 83.1               | 0.08              | 0.323             | 0.332            |

## **LED to Tungsten**

| 622 One and One Eighth Digital LED CTO | Converts cool white LED to Tungsten. Allows sources to be blended both visually and for digital imaging. | 7000K to<br>3200K | +170 | 41.5 | 0.38 | 0.428 | 0.371 |
|--|--|-------------------|------|------|------|-------|-------|
| 624 Full Digital LED CTO               | Converts cool white LED to Tungsten. Allows sources to be blended both visually and for digital imaging. | 6200K to<br>3200K | +151 | 44.2 | 0.35 | 0.415 | 0.366 |
| 626 Seven Eighths Digital<br>LED CTO   | Converts cool white LED to Tungsten. Allows sources to be blended both visually and for digital imaging. | 5550K to<br>3200K | +132 | 49.1 | 0.31 | 0.402 | 0.368 |
| 628 Three Quarter Digital<br>LED CTO   | Converts cool white LED to Tungsten. Allows sources to be blended both visually and for digital imaging. | 5000K to<br>3200K | +113 | 55.4 | 0.26 | 0.387 | 0.369 |

## Discharge and Arc to Tungsten

| 236 HMI (to Tungsten)                              | Converts HMI to 3200K, for use with Tungsten film.                  | 58.2 | 0.24 | 0.426 | 0.376 |
|--|---|------|------|-------|-------|
| 237 CID (to Tungsten)                              | Converts CID to 3200K, for use with Tungsten film.                  | 38.5 | 0.41 | 0.430 | 0.365 |
| 238 CSI (to Tungsten)                              | Converts CSI to 3200K, for use with Tungsten film.                  | 29.8 | 0.53 | 0.372 | 0.331 |
| 212 LCTYellow (Y1)                                 | Reduces Colour Temperature of low carbon arcs to 3200K.             | 88.7 | 0.05 | 0.340 | 0.363 |
| 230 Super Correction LCT<br>Yellow                 | Converts Yellow carbon arc (of low colour temperature) to Tungsten. | 41.9 | 0.38 | 0.367 | 0.368 |
| 232 Super Correction White Flame Green to Tungsten | Converts White Flame arc to 3200K, for use with Tungsten film.      | 37.4 | 0.43 | 0.423 | 0.385 |

# Correction

|                                     |  | (Measured to source  |           | -                 |       |
|-------------------------------------|--|----------------------|-----------|-------------------|-------|
| leutral Density                     |  | ransmission<br>Y%    | abs       | Chromaticity<br>x | y y   |
| 298 .15ND                           | Reduces light <sup>1</sup> / <sub>2</sub> stop, without changing colour. | 70.2                 | 0.15      | 0.311             | 0.319 |
| 209 .3ND                            | Reduces light 1 stop, without changing colour.                           | 50.0                 | 0.30      | 0.310             | 0.319 |
| 210 .6ND                            | Reduces light 2 stops, without changing colour.                          | 25.0                 | 0.60      | 0.308             | 0.317 |
| 211 .9ND                            | Reduces light 3 stops, without changing colour.                          | 12.3                 | 0.90      | 0.310             | 0.322 |
| 299 1.2ND                           | Reduces light 4 stops, without changing colour.                          | 6.3                  | 1.18      | 0.308             | 0.315 |
| ltra Violet Absorption              |  | _                    |           |                   |       |
| 226 LEE UV                          | Transmission of less than 50% at 410nms.                                 | 91.5                 | 0.04      | 0.314             | 0.321 |
| 213 White Flame Green               | Corrects White Flame Carbon arcs by absorbing ultra violet               | 80.0                 | 0.10      | 0.317             | 0.359 |
| inus Green - Used on lightir        | g to eliminate unwanted green cast created by discharge light sources    | s on film.           |           |                   |       |
| 247 LEE Minus Green                 | Approximately equivalent to CC30 Magenta camera filter.                  | 57.8                 | 0.22      | 0.325             | 0.279 |
| 248 Half Minus Green                | Approximately equivalent to CC15 Magenta camera filter.                  | 72.0                 | 0.14      | 0.317             | 0.297 |
| 249 Quarter Minus Green             | Approximately equivalent to CC075 Magenta camera filter.                 | 82.4                 | 0.08      | 0.312             | 0.307 |
| 279 Eighth Minus Green              | Provides very slight correction.   | 86.5                 | 0.06      | 0.312             | 0.311 |
| <b>lus Green -</b> Used on Daylight | and Tungsten light sources to provide green cast when used in conjun     | ction with discharge | lighting. |                   |       |
| 244 LEE Plus Green                  | Approximately equivalent to CC30 Green camera filter.                    | 74.2                 | 0.12      | 0.324             | 0.388 |
| 245 Half Plus Green                 | Approximately equivalent to CC15 Green camera filter.                    | 81.7                 | 0.08      | 0.319             | 0.355 |
| 246 Quarter Plus Green              | Approximately equivalent to CC075 Green camera filter.                   | 84.6                 | 0.07      | 0.315             | 0.337 |
|                                     |  |                      |           |                   |       |

(Measured to source C, Correlated ColorTemperature of 6774K)

# Correction

| Polariser     |  | Mired<br>Shift | Transmission<br>Y% |      | Stop<br>Value     | Note                                |
|---------------|--|----------------|--------------------|------|-------------------|-------------------------------------|
|               |  | +19            | 50.0               | 0.3  | 1                 | single sheet                        |
| 239 Polariser | Made from 0.006" (150 micron) Triacetate. Reduces glare and reflection. Use with LEE Polarising Camera Filter. |                | 38.0               | 0.42 | 1 <sup>1</sup> /3 | Axis<br>uncrossed<br>(double sheet) |
|               |  |                | <.05               | >3   | >10               | Axis crossed (double sheet)         |

#### **Urban Effects**

 $\begin{array}{ccc} \text{(Measured to source C, Correlated Color Temperature of 6774K)} \\ \text{Transmission Absorption} & \text{Chromaticity Co-ordinates} \\ \text{Y\%} & \text{abs} & \text{x} & \text{y} \end{array}$ 

|                            |   | 1 70 | aus  | ^     | У     |
|----------------------------|---|------|------|-------|-------|
| 600 Arctic White           | A bright, brilliant blue-grey light at 100%. It does not warm up as it dims and is not affected by amber drift. Useful as a backlight or for special effects where a whiter light is called for.            | 9.5  | 1.02 | 0.230 | 0.223 |
| 601 Silver                 | A silver-grey light at full power, dims through lavender-grey then warm brown-grey. Works well with 550 ALD Gold. Good for creating a sense of intense darkness on stage whilst still being useful.         | 9.0  | 1.04 | 0.244 | 0.248 |
| 602 Platinum               | At full power produces dazzling grey light with slight red bias, when dimmed warms up quickly to a useful brown. Good for effect lighting as well as a cold, white sidelight that has some warmth in it.    | 15.3 | 0.82 | 0.261 | 0.267 |
| 603 Moonlight White        | A pleasant white light at full power, dims down to a warm colour and at low intensities has more yellow than red content. Good for sunlight effect as if through stormy clouds reflecting off of the ocean. | 28.3 | 0.55 | 0.268 | 0.271 |
| 741 Mustard Yellow         | Spooky when used in haze. Removes some red and blue. Works best with daylight bulbs. Sodium lamp effect.  | 3.3  | 1.48 | 0.506 | 0.491 |
| 642 Half Mustard Yellow    | Half strength Sodium light effect, designed for use with daylight sources.  | 13.7 | 0.86 | 0.500 | 0.496 |
| 643 Quarter Mustard Yellow | Quarter strength Sodium light effect, designed for use with daylight sources.   | 31.3 | 0.50 | 0.483 | 0.493 |
| 650 Industry Sodium        | Used on tungsten to blend with Sodium light.  | 34.1 | 0.47 | 0.397 | 0.424 |
| 651 Hi Sodium              | Used on tungsten to create a High Pressure Sodium look.   | 48.8 | 0.31 | 0.444 | 0.396 |
| 652 Urban Sodium           | Used on tungsten to create the orange glow associated with Sodium light.  | 21.9 | 0.66 | 0.535 | 0.399 |
| 653 Lo Sodium              | Used on tungsten to create a Low Pressure Sodium look.  | 2.4  | 1.62 | 0.540 | 0.443 |

# Acrylic Panels

These panels are manufactured specifically for LEE and exhibit the same degrees of colour accuracy and consistency as our range of lighting filters.

Specifically for use over windows for correcting daylight, these hardwearing panels can be cut to size and installed permanently, or used on location again and again.

The panels are available in a range of Colour Temperature Oranges and Neutral Densities, including combinations that are unique to LEE Filters.

The panels are available in two sizes:

| Size                       | Thickness  | Weight         | Note   |
|----------------------------|------------|----------------|--|
| 2.44m x 1.22m<br>(8' x 4') | 3mm (1/8") | 9.6kg (21lbs)  | All panels<br>available in<br>this size                |
| 2.44m x 1.52m<br>(8' x 5') | 3mm (1/8") | 12kg (26.5lbs) | Only A209,<br>A210 & A211<br>available in this<br>size |

(Measured to source C, Correlated ColorTemperature of 6774K)

| Mired | Transmission |
|-------|--------------|
| Shift | Y%           |

| Daylig | ht to | Tungs | ten |
|--------|-------|-------|-----|
|--------|-------|-------|-----|

| A205 Half CTO        | Converts Daylight to Tungsten Light.                     | +90  | 72.6 |
|----------------------|--|------|------|
| A207 Full CTO + .3ND | Converts Daylight to Tungsten and reduces light 1 Stop.  | +175 | 30.2 |
| A208 Full CTO + .6ND | Converts Daylight to Tungsten and reduces light 2 Stops. | +175 | 13.8 |

#### **Neutral Density**

| A209 .3ND | Reduces light 1 stop, without changing colour.  | 0 | 48.0 |
|-----------|---|---|------|
| A210 .6ND | Reduces light 2 stops, without changing colour. | 0 | 22.2 |
| A211 .9ND | Reduces light 3 stops, without changing colour. | 0 | 13.1 |

## **Reflection Media**

**Reflector** Special note

| 271 Mirror Silver         | Produces hard reflection. White backed.                  | Available in 6.10m x 1.52m (20'x60") rolls |
|---------------------------|--|--|
| 273 Soft Silver Reflector | Produces soft reflection. White backed.                  | Available in 6.10m x 1.52m (20'x60") rolls |
| 274 Mirror Gold           | Produces hard reflection. White backed. Mired Shift +45. | Available in 6.10m x 1.52m (20'x60") rolls |
| 272 Soft Gold Reflector   | Produces soft reflection. White backed. Mired Shift +45. | Available in 6.10m x 1.52m (20'x60") rolls |

#### **Scrim**

| 270 LEE Scrim   | Perforated reflector producing a very soft reflection. Silver on one side and black on reverse.   | Stop value 11/2 when used as a filter, Transmission 36%. |
|-----------------|---|--|
| 275 Black Scrim | A flexible perforated material that is black on both sides. Can be used on windows to reduce light intensity, without causing any unwanted reflections. | Stop value 11/2 when used as a filter, Transmission 36%. |

# Protection Media

Available in two roll sizes 7.62m x 0.61m (25' x 24") 15.24m x 0.30m (50' x 12")

| Heat Shield         |   | Transmission<br>Y% | Absorption abs | Chromaticity<br>x | / Co-ordinates<br>y |
|---------------------|---|--------------------|----------------|-------------------|---------------------|
| 269 LEE Heat Shield | A transparent flexible film used to extend the life of a filter. The shield should be placed between the light source and the filter allowing distance between the shield and the filter. Air should be allowed to circulate freely around the LEE Heat Shield. | 91.0               | 0.04           | 0.311             | 0.317               |
| Foil                |   |                    | Special no     | te                |                     |

Used to reduce unwanted light spill or to control unwanted light reflection.

280 Black Foil

# Diffusion Media

|   | ame Retardant<br>er Film             |   | Transmissi<br>Y% | on Stop<br>Value | Special Notes                            |
|---|--------------------------------------|---|------------------|------------------|--|
|   | 216 White Diffusion                  |   | 36               | 11/2             | Rolls also available in 1.52m (60") widt |
|   | 416 Three Quarter<br>White Diffusion |   | 50               | 1                |  |
|   | 250 Half White Diffusion             |   | 60               | 3/4              | Rolls also available in 1.52m (60") widt |
|   | 450 Three Eighth<br>White Diffusion  | Used for soft light effects. Manufactured on a tough Polyester base in a range of seven strengths.          | 63               | 2/3              |  |
|   | 251 Quarter White Diffusion          |   | 80               | 1/3              | Rolls also available in 1.52m (60") wid  |
| • | 252 Eighth White<br>Diffusion        |   | >85              | <1/4             |  |
| • | 452 Sixteenth White Diffusion        |   | >85              | <1/4             |  |
|   | 400 LEELux                           | A dense white diffuser used for soft light effects (125 micron polyester base).                             | 36               | 11/2             | Wide Rolls also available                |
| • | 255 Hollywood Frost                  | Light frost effect - softens edges.   | 83               | <1/3             |  |
|   | 228 Brushed Silk                     | Directional soft light effect used for scattering light in one direction only.                              | 60               | 3/4              |  |
|   | 410 Opal Frost                       | Used for softening spotlight beam edges without altering shape (23 micron polyester base).                  | 71               | 1/2              |  |
| • | 420 Light Opal Frost                 | Similar characteristics to Opal Frost, but less diffuse (36 micron polyester base).                         | >85              | <1/4             |  |
| • | 258 Eighth Hampshire<br>Frost        | Extra Light frost effect.   | >85              | <1/4             |  |
| • | 257 Quarter Hampshire<br>Frost       | Extra Light frost effect.   | >85              | <1/4             |  |
| • | 256 Half Hampshire<br>Frost          | Extra Light frost effect.   | >85              | <1/4             |  |
|   | 253 Hampshire Frost                  | Light frost effect.   | >85              | <1/4             |  |
|   | 750 Durham Frost                     | A frost that almost completely softens shutter edges and removes hot spots.                                 | >85              | <1/4             |  |
|   | 720 Durham Daylight<br>Frost         | Smoothes PAR or flood washes of large areas. Useful for houselights; good for entrances from natural light. | 32.3             | 12/3             | Full CT Blue                             |
|   | 717 Shanklin Frost                   | 201 with frost to soften the beam of profile units.   | 37               | 11/2             | Full CT Blue                             |
|   | 718 Half Shanklin Frost              | 202 with frost to soften the beam of profile units.   | 56               | 3/4              | Half CT Blue                             |
|   | 705 Lily Frost                       | Smoothes PAR or flood washes of large areas. Useful for houselights; a good colour wash for evening events. | 38               | 11/3             | Colour = 704                             |
| • | 791 Moroccan Frost                   | Smoothes PAR or flood washes of large areas. Useful for houselights; good for interior colour washes.       | 57               | 3/4              | Colour = 790                             |

# Diffusion Media

|                   |                                 |   | Transmission<br>Y% | n Stop<br>Value | Special Notes                              |
|-------------------|---------------------------------|---|--------------------|-----------------|--|
|                   | 749 Hampshire Rose              | Combines flesh tone warmer 154 with some Hampshire Frost.   | 74                 | 1/2             | Colour = 154                               |
|                   | 217 Blue Diffusion              | As White Diffusion but with the addition of Eighth CTB.   | 36                 | 11/2            | 1/8 CT Blue                                |
|                   | 224 Daylight Blue Frost         | Used for soft light effects with the addition of tungsten correction 201.   | 22                 | 21/4            | Full CT Blue                               |
|                   | 225 Neutral Density<br>Frost    | Used for soft light effects with the addition of 0.6 Neutral Density.   | 25                 | 2               | .6 Neutral Densit                          |
| Grid Clo          | oth                             |   |                    |                 | 1  |
|                   | 430 Grid Cloth                  |   | 18                 | 21/2            |  |
|                   | 432 Light Grid Cloth            | A waterproof textile/fabric diffusion that is reinforced to allow it to be  | 30                 | 13/4            | Rolls only<br>1.37m x 7.62m<br>(54" x 25') |
|                   | 434 Quarter Grid Cloth          | sewn or grommetted - ideal for attaching to large frames. Comes in three weights.   | 60                 | 3/4             |  |
|                   | 460 Quiet Grid Cloth            |   | 15                 | 23/4            |  |
|                   | 462 Quiet Light Grid<br>Cloth   | A textile/fabric diffusion that is reinforced to allow it to be sewn or   | 22.5               | 21/4            | Rolls only<br>1.37m x 7.62m<br>(54" x 25') |
|                   | 464 Quiet Quarter Grid<br>Cloth | grommetted - ideal for attaching to large frames, but that is quiet when used in windy conditions outdoors. Comes in three weights. | 47.5               | 1               |  |
| Tough S           | Spun                            |   |                    |                 | 1  |
|                   | 214 Full Tough Spun             |   | 18                 | 21/2            |  |
|                   | 215 HalfTough Spun              | Softens light, reduces intensity. Manufactured from non-woven Polyester.  | 36                 | 11/2            | Rolls only<br>7.62 x 1.22m<br>(25' x 48")  |
|                   | 229 Quarter Tough Spun          |   |                    | 3/4             |  |
|                   | -                               |   |                    |                 | 1  |
| Flame  <br>Polyme | Retardant<br>r Film             |   |                    |                 |  |
|                   | 129 Heavy Frost                 | Strong diffuser, eliminates nearly all shadows.   | 25                 | 2               |  |

|   | 129 Heavy Frost            | Strong diffuser, eliminates nearly all shadows.                             | 25  | 2            |                                 |
|---|----------------------------|---|-----|--------------|---------------------------------|
| • | 220 White Frost            | Used for soft light effects.  | 39  | <b>1</b> 1/3 |                                 |
|   | 221 Blue Frost             | Used for soft light effects with the addition of 218.                       | 42  | <b>1</b> ½   | 1/8 CT Blue                     |
| • | 254 New Hampshire<br>Frost | Used to soften the edges of spotlight beams, and to reduce the blue fringe. | >85 | <1/4         | HT only<br>(For sizes see p6-9) |
|   | 774 Soft Amber Key 1       | Used for producing a warm key light colour.                                 | 71  | 1/2          |                                 |
| • | 775 Soft Amber Key 2       | Used for producing a warm key light colour.                                 | 58  | 3/4          |                                 |

# Diffusion Media

| Flexi Fro | ost                   |  |   | Transmission<br>Y% | Stop<br>Value | Special Notes                         |
|-----------|-----------------------|--|---|--------------------|---------------|---------------------------------------|
|           | 439 Heavy Quiet Frost | A very strong diffuser, but pliable to handle, which virtually eliminates shadows at close distances.  |   | 7.8                | 32/3          | Thickness<br>270 microns<br>(11 thou) |
| 0         | 402 Soft Frost        | A strong diffuser that creates a wide field of soft illumination but is very pliable to handle. Diffusion characteristics similar to 216, falls between 216 and 129. | Advantages of this material are the large roll width; lack of noise when handled or used in windy conditions; | 12.0               | 3             | Thickness<br>100 microns<br>(4 thou)  |
| ٠         | 429 Quiet Frost       | A strong diffuser that creates a wide field of soft illumination but is thicker than the 402 product. Diffusion characteristics similar to 416.                      | waterproof for use<br>outdoors, can be<br>sewn or grommetted<br>together for use on                           | 18.4               | 21/2          | Thickness<br>325 microns<br>(13 thou) |
|           | 404 Half Soft Frost   | A useful diffuser without too much light loss but very pliable to handle. Diffusion characteristics fall between 251 and 252.  | large frames; flame<br>retardant.<br>1.52m width, 6.10m<br>length, (60" x 20')                                | 36.2               | <b>1</b> ½    | Thickness<br>100 microns<br>(4 thou)  |
| ٠         | 414 Highlight         | A useful diffuser without too much light loss in a thick format. Diffusion characteristics similar to 252.   |   | 39.6               | 11//3         | Thickness<br>300 microns<br>(12 thou) |

#### **Perforated Diffusion**

| 439P Perforated Heavy<br>Quiet Frost | A combination of both direct and strongly diffused light. | 1.52m width, 6.10m length,   | 21/3         | Thickness<br>270 microns<br>(11 thou) |
|--------------------------------------|---|------------------------------|--------------|---------------------------------------|
| 414P Perforated<br>Highlight         | A combination of both direct and soft diffused light.     | (60" x 20') Flame retardant. | <b>1</b> 1/3 | Thickness<br>300 microns<br>(12 thou) |

## **Tough Spun**

|   | 261 Tough Spun<br>FR - Full | 2   | 25 | 2     |  |
|---|-----------------------------|---|----|-------|--|
| Ю | 262 Tough Spun<br>FR - ¾    |   | 32 | 12/3  |  |
| О | 263 Tough Spun<br>FR - ½    | Non yellowing flame retardant spun polyester material in five densities to give better light control. | 41 | 11//3 | Rolls only<br>7.62 x 1.22m<br>(25' x 4') |
|   | 264 Tough Spun<br>FR - ¾    |   | 50 | 1     |  |
| • | 265 Tough Spun<br>FR - 1/4  |   | 60 | 3/4   |  |



## Fluorescent Sleeves



COLOURED SLEEVES USED WITH DIFFUSION CREATE A SMOOTH WALLWASH.

EXTEND THE LIFE OF COLOURED INSERTS BY ADDING LEE UV INTO A T8 OR T12 TUBE.

## **FLUORESCENT SLEEVES**

When it comes to fluorescent lighting, LEE has every base covered, thanks to the Fluorescent Coloured Sleeves range.

All of the LEE colours (pages 26-47) are available as fluorescent sleeves. You can also phone and request a swatch book containing the full colour range.



#### **Pre-assembled Sleeves**

Our pre-assembled sleeves are delivered ready to use. Made from a thermally stable, electrically insulating polycarbonate, the sleeves are capped at the ends, allowing them to be fixed easily to the fluorescent tube. The sleeves are available in standard lengths for T5, T8 and T12 diameter tubes.

Please contact us if you intend to use sleeves on high-output T5 tubes, as not all of them are suitable: the extreme heat at either end of these tubes can cause the filter to discolour.







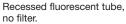
T8 Sleeves



T12 Sleeves

#### Easily Transform the Mood of a Room







Amber filter.



Blue filter.



Magenta filter.

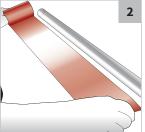
#### **Self-assembly Sleeves**

Should you wish to assemble the sleeves yourself, LEE Filters can provide pre-cut Quick Rolls, as well as clear polycarbonate sleeves.

Quick Rolls are 7.62m (25ft) in length and are available for T5, T8 and T12 diameter sleeves.



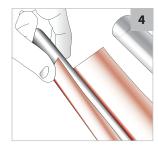
You'll require a clear sleeve, a Quick Roll of colour, two end caps, a knife and a rod or pole to stuff the sleeve.



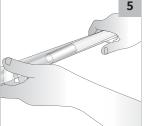
Unwind the roll of gel to the length of the sleeve.



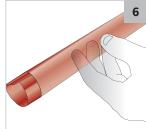
Cut the gel slightly longer than the length of the sleeve.



Wrap the gel tightly around the rod.

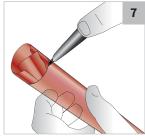


Holding the gel tightly around the rod feed it into one end of the sleeve. Then push it through the sleeve until it comes out the other end.

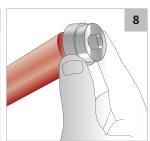


Remove the rod from the sleeve, leaving the gel inside.

NEUTRAL DENSITY FILTERS USED IN FLUORESCENT TUBES WILL REDUCE LIGHT WHERE INTENSITY IS AN ISSUE.



Trim off any excess gel from the ends.



Place end caps on both ends of the sleeve.

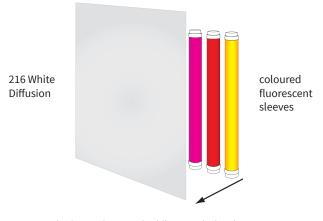
## Fluorescent Sleeves

## **GET CREATIVE**



#### **Two-tone sleeves**

There's an easy way to increase the versatility of your fluorescent sleeves – simply place one colour at the front and another at the back. And with more than 250 colours to choose from, the possible combinations are almost endless.

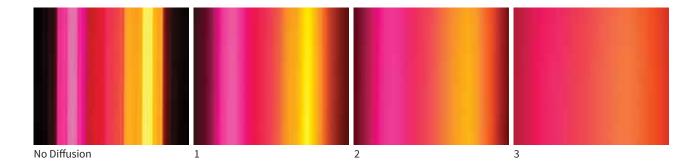


The distance between the diffusion and tubes determines the strength of the diffusion effect. The further apart, the stronger the effect; the closer together, the weaker the effect.

#### **Diffusion Effects**

Another effect that works well with coloured fluorescent sleeves is the addition of some diffusion in front of the sleeves. The diffusion softens the light giving a soft, subtle blend of colours.

In the example below, a roll of LEE 216 White Diffusion was placed in front of three coloured fluorescent sleeves. The distance between the diffusion and the sleeves was then slightly increased for each image: the further the distance, the more diffused the colours become.





# **THE GLASS SERIES**

LEE FILTERS OFFERS A COMPLETE
RANGE OF LIGHTING FILTER
PRODUCTS SPECIFICALLY
DESIGNED FOR APPLICATIONS
SUCH AS RETAIL AND
ENTERTAINMENT, AS WELL AS
BOTH INTERIOR AND EXTERIOR
LIGHTING PROJECTS.



#### **Dichroic Glass Colours**

Durable, fade-resistant and capable of withstanding temperatures of up to 371°C, LEE dichroic glass filters are in a class of their own. The manufacturing process – whereby layers of thin metal films are laid down by vacuum deposition onto a Borofloat glass substrate – results in the kind of clear, pure colour so in demand by the lighting industry.

The glass is available in 3.3mm and 1.7mm thicknesses.

#### **Professional Colours**

Chosen after extensive research among design professionals, the Glass Series colour palette provides a range of 51 consistent, repeatable colours. This includes subtle, less saturated tones suitable for architectural use. Building on our expertise in film and theatre lighting, LEE has closely matched the glass series on polyester lighting filter material to provide a convenient swatch reference book. Available on request, lighting professionals can use this book to test colour schemes or demonstrate the effects of different filters.



LEE FILTERS DICHROIC GLASS IS NOT TEMPERED.

#### **Framed Glass**

Offering protection from both mechanical and thermal shock, these lightweight aluminium frames – which are available in both plain and colour – are compatible with all the most popular lighting fixtures in the entertainment, architectural and theatre industries. Made using an innovative silicone gasket, which surrounds the glass, the frames can also be manufactured with a safety mesh for added strength.

The frames measure from 7.5cm (3") to 60cm (23.5") across, and can be designed to any shape.

#### **Framed Glass**

- 15.8cm (6.25") Source Four
- 19cm (7.5") Source Four PAR
- 25.4cm (10") PAR 64

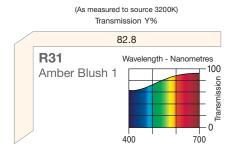
#### **Unframed Glass**

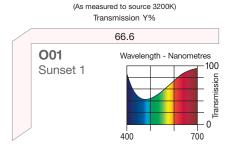
Unframed filters can be supplied for use in smaller light fittings with integral holders.

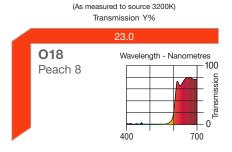
- 4.99cm (1.96") MR16 and Par 16 (circular)
- 5cm (2") square
- For further information on custom sizes, please call LEE Filters for a quotation.

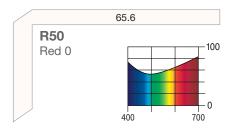


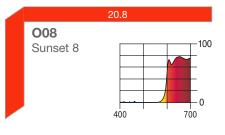
## The Glass Colour Range

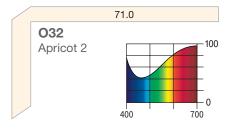


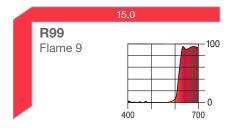


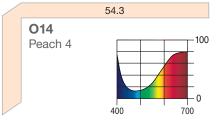


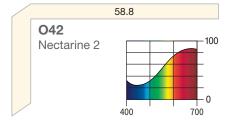


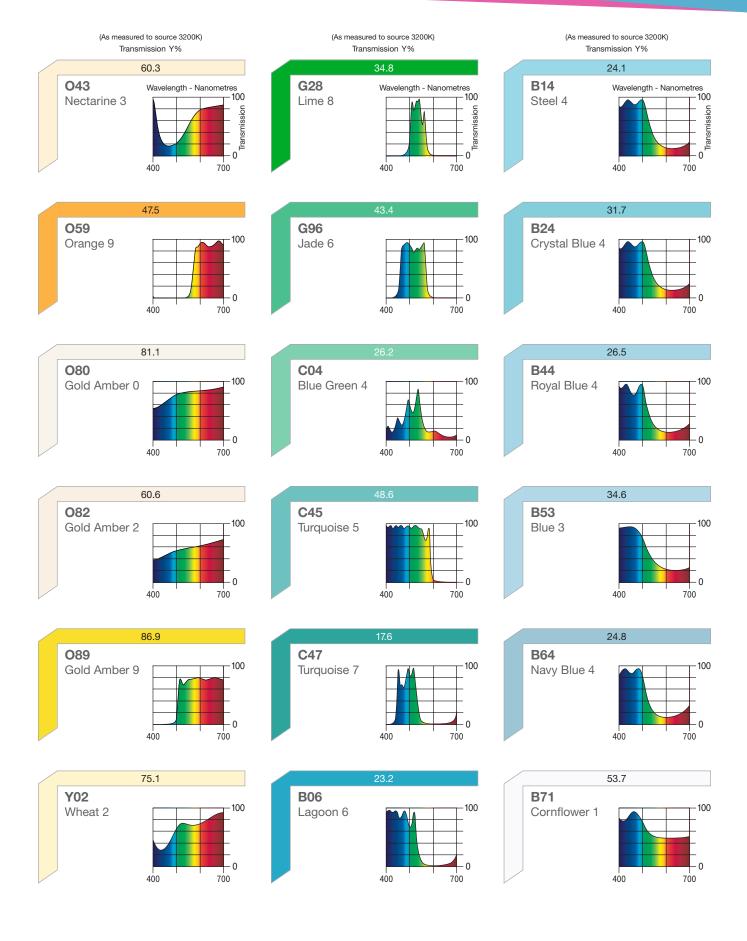


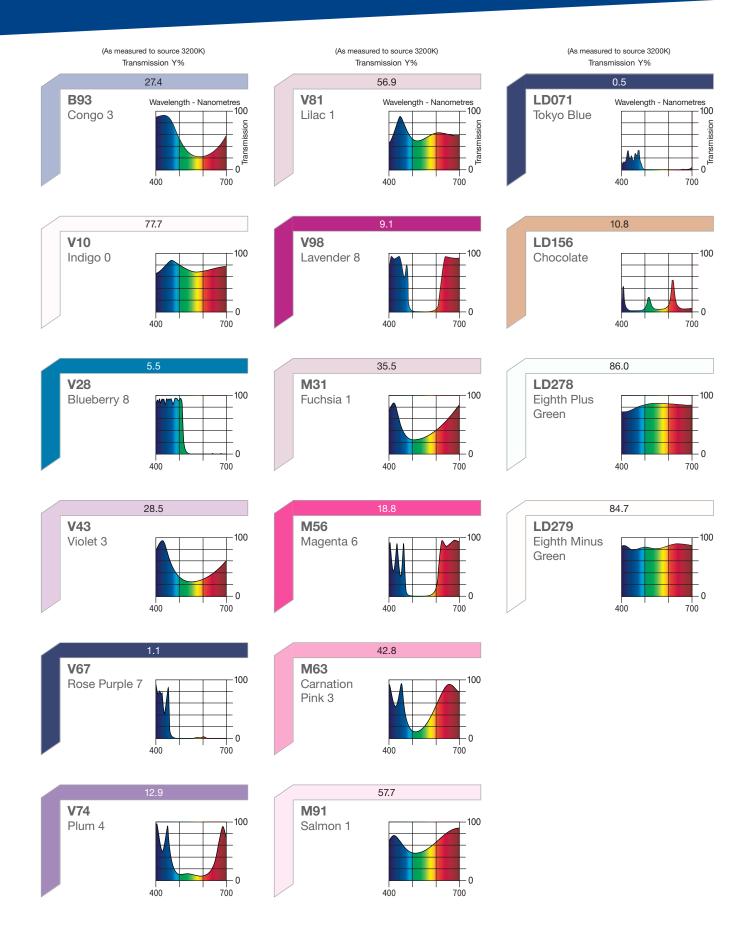


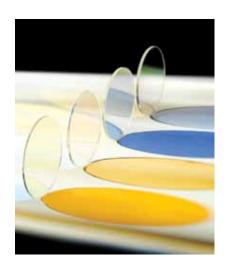












## **SPECIALISED GLASS FILTERS**

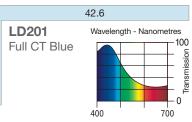
LEE Specialised Filters are highly versatile and increase the lighting designer's scope for creativity and technical excellence. The range includes warming, cooling and UV filters.

Warming filters (CT Orange) are ideal for warming up a cool light source, such as an LED light. In addition, they can also be used as a warm amber colour in their own right, or to reduce the overall colour temperature of a light source.

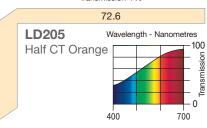
Cooling filters (CT Blue) are designed to cool a light source. They can also be used as a stand-alone cool blue colour, or to convert tungsten light to daylight.

The UV Blocker absorbs ultra-violet light, while the Hot Mirror reflects heat back into the light source.

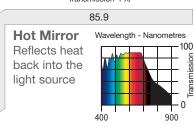


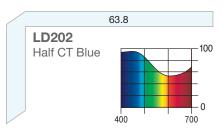


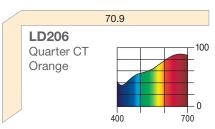
# (As measured to source 3200K) Transmission Y%

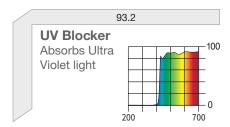


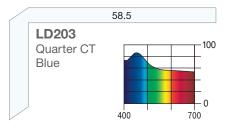
# (As measured to source 3200K) Transmission Y%

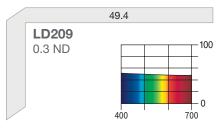


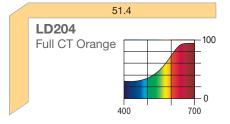


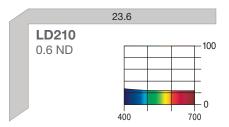










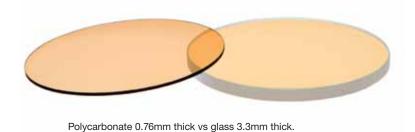


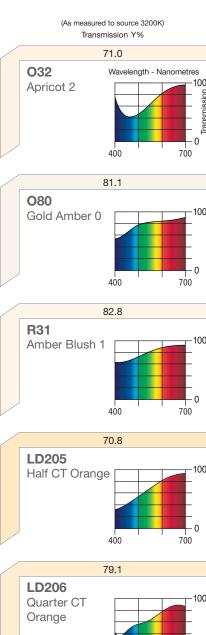
# **DICHROIC POLYCARBONATE FILTERS**

Durable and versatile, the filters in this five-colour range have a dichroic coating on one side, and provide an optimal colour correction solution for permanent installations (such as restaurants). A mere 0.76mm thick, the LEE dichroic polycarbonate filters fit easily into a small-fixture accessory slot.



- Stocked in 49.9mm diameter (custom sizes are available upon request).
- Five stock Dichroic Series colours (custom colours are available upon request).
- Polycarbonate substrate includes a highly heat-resistant hard coating on both sides.
- Dichroic coating is a process of vacuum deposition of thin metal films onto a polycarbonate substrate.
- Maximum operating temperature is 100°C.
- Polycarbonate material is 0.76mm thick.





## Frosted Dichroic Glass Colours



LEE FILTERS DICHROIC GLASS
IS COATED ON ONE SIDE. TO
DETERMINE WHICH SIDE IS COATED,
TOUCH YOUR FINGER TO THE FLAT
SURFACE OF THE FILTER. ON THE
COATED SIDE, THE REFLECTION
WILL MEET YOUR FINGER. ON THE
UNCOATED SIDE, THERE WILL BE A
SPACE BETWEEN YOUR FINGER AND
THE REFLECTION.



**Unfrosted Glass** 



Frosted Glass

# FROSTED DICHROIC GLASS COLOURS

Sometimes, colour alone isn't the sole consideration – the quality of the light is just as important. For a diffused light, the LEE Frosted Colour Dichroic filters provide colour and softness in one filter. Colour coated on one side and diffused on the other, the filters – which are available in every colour in the glass series – are capable of withstanding temperatures up to 371°C, making them particularly resistant to fading.

Frosted Colour Dichroic Glass filters are available for MR16 and PAR 16 circular light fittings, as well as in custom shapes and sizes.

# **GLASS DIFFUSION FILTERS**

The LEE Glass Diffusion filters come in a variety of strengths, making them a versatile addition to the lighting designer's armoury.

They are available for MR16 and PAR 16 fittings, as well as in custom shapes and sizes.



#### **Linear Diffusion**



**Softening Diffusion** 



#### **O80 Linear Diffusion**

Combined Linear Diffusion and warming filter



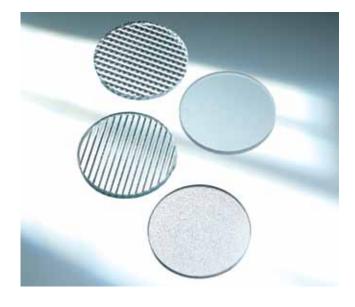
**Frosted Diffusion** 



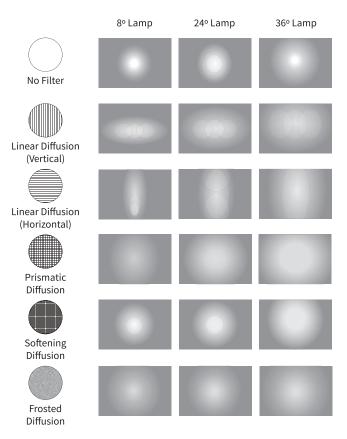
All diffusion filters are available in custom shapes and sizes.



**Prismatic Diffusion** 



The diagram below shows the diffusion effect created when using an 8°, 24° or 36° 50w MR16 bulb, at a distance of 92cm (3ft).





**Screw-on Accessory Holder** 

The Screw-on Accessory Holder allows the lighting designer to

attach up to two filters directly

allowing for a combination of

effects within the one fitting.

to an MR16 or PAR 16 bulb,

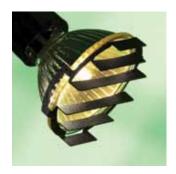
# **MR16 / PAR 16 ACCESSORIES**

ALL LEE CLIP-ON ACCESSORIES ARE COMPATIBLE WITH MR16 OR PAR 16 BULBS AND ARE AVAILABLE IN PACKS OF FIVE, IN SILVER OR BLACK.



Clip-on Filter Holder

This holds a single filter and is suitable for a standard open bulb.



Clip-on Baffle

The Clip-on Baffle (also known as a blade louvre) limits glare by trapping the peripheral light sideways. The baffle also gives the fixture a more professional look.



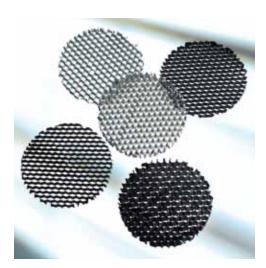
**Clip-on Barndoors** 

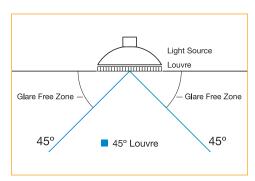
The LEE Clip-on Barndoors have a dual function – they both limit the glare from a bulb and permit the user to direct the light in a particular direction. To use, simply rotate the flaps or bend the hinges – the high quality of which means they can be adjusted several times.



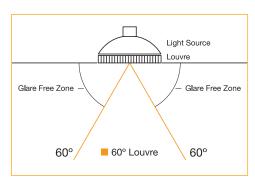
# **LOUVRES**

A Honeycomb Louvre is designed to reduce the glare from a light fitting. They are available in 45° and 60° angles, and are also available in custom shapes and sizes, enabling them to be used on a number of different light fittings.









#### **Promotional Items**

## **SWATCHES**

In order to give our end-users the highest possible levels of information and support, LEE Filters makes available a package of technical information.

The LEE Filters swatch books each serve a different purpose:

#### 1. The Designers Edition

Features the entire filter range in chromatic groupings.

#### 2. The Numeric Edition

Features the entire filter range in numerical order.

#### 3. The LED Swatch

Features the entire range of LED Filters.

#### 4. The Cinematographers' Edition

A large-format, dual-swatch book, the Cinematographers' Edition features the grades of colour correction and diffusion filters that are most frequently used in film.

#### 5. The Master Edition

A very large-format swatch of lighting products. (There is a charge for this swatch book.)

#### 6. The Pocket Edition

Want to compare which LEE Filters products are the equivalent of other manufacturers' products? This is the swatch book you need. It includes a listing of all lighting filter products.

#### 7. The Glass Edition

A large-format swatch book, this contains polyester lighting filter material that closely matches the colours from the glass series.

#### 8. The Fluorescent Edition

A sample of each of the polyester colours that are available for the clear fluorescent sleeves.



# **SWATCH APP**

The LEE Swatch iPhone app puts the complete range of LEE lighting filters on one screen, with an innovative colour picker so you can easily build palettes anytime inspiration strikes.



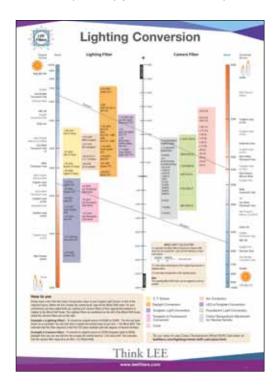
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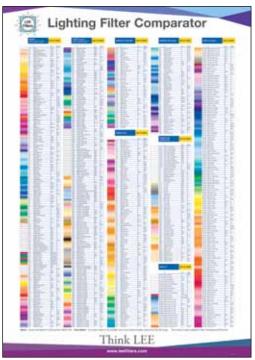




# **POSTERS**

For a useful, at-a-glance reference for LEE products and essential lighting and filter topics, simply order one of our A1 posters.





## **CUTTERS**

Safer than open blades and easy to use, these filter cutters are suitable for cutting LEE polyester material.

# **WEBSITE**

For further information on all LEE Filters products, visit www.leefilters.com.



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