DTFN elite LED theatre

LED | EM | IP 65 | | | 60+

Information

- State of the art recessed LED luminaire for healthcare application, specifically in operating theatres
- During surgery, lighting must service a number of different needs;
  – The room; room illumination to ensure complete visibility.
  – The patient; high quality colour rendering to ensure a clear and detailed view of the patient's biology, e.g. the colouration and appearance of skin, blood and organs etc.
  – The screen; green lighting to enhance viewing of vital display screens and to eliminate glare traditionally associated with white light sources
- DTFN Elite LED Theatre has been specially designed to meet these needs, whilst also ensuring energy efficiency and a high IP rating for cleaning and infection control

Optics

- Luminaire consists of:
  – White ra90 LEDs emitting 11,500 lumens (134W)
  – Green LEDs emitting 1400 lumens (65W)
- Two TP(a) rated optic options:
  – Prismatic acrylic above 4mm toughened glass
  – Single sheet 3mm prismatic fireguard material
- White Ra≥90 LEDS with 4000K 'cool' white colour temperature
- Green LEDs at wavelength of 505nm
- Separate switching of white and green LEDs
- DALI as standard

Note – a glass front face resists all cleaning chemicals and is best for a sterile environment. Other TP(a) materials are selected for best chemical resistance. If advice is needed contact the Whitecroft Technical Desk.

Body

- 1200 x 600mm nominal luminaire size
- Front access only
- Welded steel body finished white
- Suitable for cut and prepared aperture ceilings and sandwich panels with capped aperture reinforcements up to a depth of 91mm front and 108mm back access with standard brackets or 155mm front and 172mm back access with special deep ceiling bracket
- Dual IP rated – to a BSI tested and certified construction as protecting the room to IP65 from void contamination with the front frame in place and IP54 with the frame removed
- Extruded aluminium outer frame (gasketed to ceiling) removable inner frame integrate in line but at an angle to eliminate a vertical gap. Additional mastic sealant between outer frame and ceiling does not impede lamp access. Concealed front frame fixings and white full gloss frames
- The diffuser clamping system is highly secure and will accept glass. The inner frame design facilitates diffuser replacement
- Solid aluminium side arm jacking brackets adjusted from within the sealed body (from the room above for back access versions)

White Ra≥90 LEDs

DTFN elite LED theatre

Order Codes

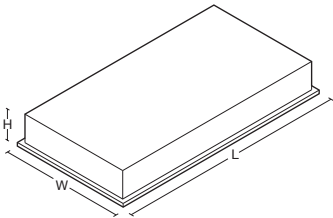| Optic	DALI	3 hr Emergency
Prismatic acrylic above 4mm toughened glass,	D9NGAGY14K	D9NGAGY14KEM
Prismatic TP(a) single sheet	D9NGKY14K	D9NGKY14KEM

Accessories

1200 x 600mm deep ceiling bracket	150CBKT1200

Options

COMEPS	Add suffix /EP	i.e. D9NGAGY14K/EP

Dimensions

Version	W	L	H	KG	KG⁽ᵉᵐ⁾
Acrylic above glass	1325	603	124	28.5	29.5
Single sheet	1325	603	124	19.5	20.5

Performance Guide

Lamps	Illuminance	Spacing
134W LED	1150 lux	3.0m x 3.0m
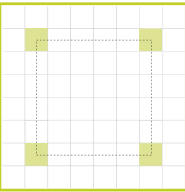
Maintenance: 0.8

Reflectance: 70/50/20

Ceiling Height: 2.7m

Working Plane: 0.8m

Ceiling Integration

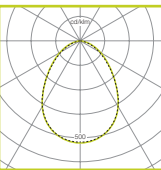Refer to common ceiling compatibility matrix – See page 404
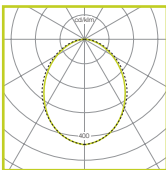
Plasterboard

Prepared aperture

LED Performance

LEDs	Colour Temp	Ra (CRI)	Life Expectancy	Colour Consistency
White	4000K	≥ 90	L_{80} (50,000hrs)	MacAdam 3 SDCM
Green	–	–	L_{70} (50,000hrs)	–

Photometric Performance

DTFA Elite Green LED
1400 lumens, 65W
• LOR = 100%
• SHR MAX = 1.46

DTFN Elite White LED
11,000 lumens, 134W
• LOR = 100%
• SHR MAX = 1.46

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.70	0.97	1.04

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Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.70	0.97	1.04

To Specify

Recessed non-modular LED luminaire for prepared aperture ceilings to a BSI tested and certified construction as IP65 frame on IP54 frame off with twin in line extruded aluminium frames with angled integration and concealed front frame fixings. Suspension via robust aluminium cam brackets adjusted from outside the luminaire. White ra90 and green separately switched LEDs specifically for Healthcare environments – as Whitecroft Lighting DTFN ELITE LED THEATRE.