





curie elite 236



DTFA elite 238



DTFN elite 242



lister 246



DTBY 248



lamina 250

clean area

clean area product selector

CLEAN ROOM LIGHTING CONSIDERATIONS

Lighting in Clean Rooms and Sterile Environments must address two key factors to satisfy regulatory bodies like the FDA. (Food & drug administration).

Firstly; will the luminaire protect the room from void contaminants? This requires luminaires have the correct and independently certified IP rating on both front frame and body. Installation methods must also ensure full and even compression of luminaire seals against ceilings.

Secondly; are luminaires suitable for a sterile environment? To achieve this, luminaires must be easy to clean with minimal grooves and crevices and meet ISPE (International Society of Pharmaceutical Engineering) Baseline Guide recommendations for different classes of room. Seals should be bacterially inert and in more critical rooms luminaire frame fixings should be tightly capped. Luminaire components must be resistant to sterilising chemicals (glass diffusers are fully resistant but thermoplastic diffuser materials which can be attacked could be preferred only if ceiling loading is an issue).

Additional considerations include the need to maximise light output, as space in clean room ceilings is limited. To satisfy section 6, B2 of the Building Regulations, TP(a) diffusers are required in recessed luminaires in rooms over 30m² and this reduces light output. T5 lamps help address this problem and make higher lumen packages available while extending lamp life to 24,000 hours and ensuring good colour rendition.

To ensure luminaires do not generate particles (i.e. corrosion or paint shedding), all our clean room luminaires use extruded aluminium frames (recommended in the ISPE guide) and are painted as standard to a depth of 120µm baked at 180°C for a hard durable scratch resistant finish.

So we can assist in selecting the luminaire it is helpful to have the following information:

- Room classification, activity and IP/IP (frame on/frame off) rating required.
- Is the environment bio-hazardous? If so please provide details.
- Front or back access? (Will lamps be changed from inside the room or from the room above).
- Is the ceiling non-modular prepared aperture or a modular T bar ceiling? If non-modular how thick is the ceiling panel?
- If capping is used to strengthen around prepared apertures on non-modular ceilings how far does this extend below the ceiling? (Curie and DTFN conceal up to 15mm of capping).
- On non-modular ceilings, is the standard suspension method suitable? If not, is a deeper ceiling bracket or special suspension method required?
- Is the room area >30m²? In which case TP(a) diffuser materials are normally necessary in the UK. In smaller rooms and certain export markets TP(b) may be acceptable.
- Does the room have computer screens and is a louvre needed?
- If a thermoplastic diffuser is being considered, what chemicals and sterilising compounds are present?
- On Spring T ceilings a recessing panel must be ordered if it is necessary to maintain room integrity to the void to IP65.

NATIONAL AND INTERNATIONAL STANDARDS COMPARISON CHART

Country	USA		EU	ISO		France	Germany	Australia
Standard	209D	209E	GGMP	BSEN 14644-1	BS5295	AFNOR X44101	VD I.2083.3	AS 1386
Date of issue	1988	1992	1997	1999	1989	1981	1993	1989
				2				
	1	M1.5		3	C		1	0.035
	10	M2.5		4	D		2	0.35
	100	M3.5	A&B	5	E, F	4000	3	3.5
	1,000	M4.5		6	G, H		4	35
	10,000	M5.5	C	7	J	400,000	5	350
	100,000	M6.5	D	8	K	4,000,000	6	3500

clean area product selector

CLEAN ROOM PRODUCT SELECTOR

STANDARD		PRODUCT						
FS209D	EU GMP 1997	Lamina	Curie <i>Elite</i> IP65/65	DTFN <i>Elite</i> IP65/54	DTFA <i>Elite</i> IP65/54	Lister IP65/20	DTBY IP65	DTFN TA <i>Elite</i> IP65/54
1		•						
10		•						
100	A&B	•	•					
1,000			•	•	•			•
10,000	C		•	•	•		•	•
100,000	D		•	•	•	•	•	•
Unclassified	Unclassified		•	•	•	•	•	•
CONTAINMENT								
ACDP 1-2			•	•	•			
ACDP 3-4			•					
CEILING COMPATIBILITY								
Prepared aperture ceilings (See product pages for thickness range)			•	•		•		•
25mm Exposed T					•	•		
Spring T (Order a recessing panel if it is necessary to maintain room integrity)					•	•		
Surface Mounted		•					•	
Page		250	236	242	238	246	248	226

Clean room luminaires are designed on the assumption there will be a positive pressure regime in the room. Containment facilities operate at a negative pressure & particularly in the case of levels 3 & 4, present a considerable hazard if any escape occurs from the room. For these applications we would request further details.



lamina



curie elite



DTFA elite



lister



DTBY



DTFN elite



DTFN through access
see healthcare section
page 226



curie elite

premier IP65/65 non-modular recessed T5 luminaire

Optics

- Lamp options:
 - 4 x 14/24W T5
 - 2 or 4 x 28W T5
 - 2, 3 or 4 x 54W T5
- All optics are TP(a) rated
 - Louvre above 4mm toughened glass
 - Prismatic acrylic above 4mm toughened glass
- Glass front face resists all cleaning chemicals and is recommended in critical aseptic or ACDP category 3 and 4 applications
- Shallow profile extruded aluminium diffuser frame with fully welded and finished corners finished white with a facility to remove and replace glass or diffusers
- Lamps on an interchangeable and rapidly detachable 'four point fix' gear and lamp tray complete with fused terminal block



Body

- Front access & back access version available
 - Back access has a hinged lid and no front frame fixings
- IP65/65 protection, a smooth crevice free front face and rapid maintenance features make Curie ideally suitable for any class of clean room or containment facility requiring a recessed non-modular luminaire up to the most exacting requirement. For FS209D class 100 and 1000 cleanrooms or equivalent and ACDP class 3 and 4
- Suitable for 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 on or off
- Triple flipper thermoplastic rubber seal with welded corners to best cope with ceiling irregularity and maintain maximum room integrity
- Steel fully welded and finished body finished white
- Solid aluminium side arm jacking brackets adjusted from within the sealed body – front access/from the room above back access

ORDER CODES

Curie Elite Louvre Above Glass	HF Gear	3 hr Emergency
T5 4 x 14W	CUWGH414	CUWGH414EMIN
T5 4 x 24W	CUWGH424	CUWGH424EMIN
T5 2 x 28W	CUWGH228	CUWGH228EMIN
T5 4 x 28W	CUWGH428	CUWGH428EMIN
T5 2 x 54W	CUWGH254	CUWGH254EMIN
T5 4 x 54W	CUWGH454	CUWGH454EMIN

Curie Elite Prismatic Acrylic Above Glass	HF Gear	3 hr Emergency
T5 4 x 14W	CUAGH414	CUAGH414EMIN
T5 4 x 24W	CUAGH424	CUAGH424EMIN
T5 2 x 28W	CUAGH228	CUAGH228EMIN
T5 4 x 28W	CUAGH428	CUAGH428EMIN
T5 2 x 54W	CUAGH254	CUAGH254EMIN
T5 3 x 54W	CUAGH354	CUAGH354EMIN
T5 4 x 54W	CUAGH454	CUAGH454EMIN

Options

DALI DIMMING	Replace H with Y in order code	i.e. CUWGY414
DSI DIMMING	Replace H with D in order code	i.e. CUWGD414
SWITCH DIMMING	Replace H with X in order code	i.e. CUWGX414
EASYTEST	Add suffix /ET to order code	i.e. CUWGH414/ET
COMET	Add suffix /CT to order code	i.e. CUWGH414/CT
BACK ACCESS	Add suffix BA to order code	i.e. CUWGH414BA
	For Emergency	i.e. CUWGH414BAEMIN
DEEP CEILING BRACKET	14/24W lamps	150CBKT600
DEEP CEILING BRACKET	28/54W lamps	150CBKT1200

Ceiling Depth Selection Guide

	Standard Bracket	Optional Deep Bracket
Front Access	33-91mm	33-155mm
Back Access	52-108mm	52-172mm

LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 14W T5	1200	24,000hrs
1 x 24W T5	1750	24,000hrs
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

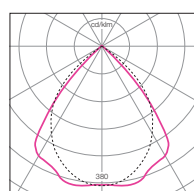
CEILING INTEGRATION

Refer to common ceiling compatibility matrix – See page 310

Plasterboard

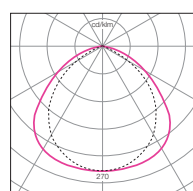
Prepared aperture

PHOTOMETRIC PERFORMANCE



4 x 14W T5
Louvre/Glass

- LOR = 57.7%
- SHR MAX = 1.55



4 x 14W T5
Prismatic/Glass

- LOR = 63.3%
- SHR MAX = 1.72

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.47	0.60	0.62

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.48	0.64	0.67



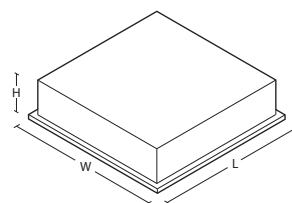
Curie Elite Louvre



Solid aluminium jacking bracket

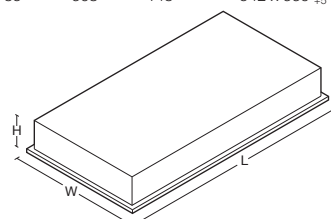
DIMENSIONS

4 x 14/24W



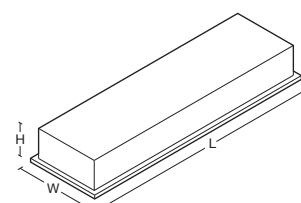
Version	L	W	H	Prepared Aperture	KG	KG
Front Access	735	608	123	542 x 669 ^{-0/+5}	18.5	19.5
Back Access	735	608	143	542 x 669 ^{-0/+5}	19.5	20.5

4 x 28/54W
3 x 54W



Version	L	W	H	Prepared Aperture	KG	KG
Front Access	1335	608	123	542 x 1269 ^{-0/+5}	28.0	29.0
Back Access	1335	608	143	542 x 1269 ^{-0/+5}	29.0	30.0

2 x 28/54W



Version	L	W	H	Prepared Aperture	KG	KG
Front Access	1335	375	123	309 x 1269 ^{-0/+5}	18.0	19.0
Back Access	1335	375	143	309 x 1269 ^{-0/+5}	19.0	20.0

PERFORMANCE GUIDE

Lamps	Illuminance	Spacing
4 x 14W T5	465 lux	2.4m x 2.4m

Maintenance: 0.8
Reflectance: 70/50/20
Ceiling Height: 2.7m
Working Plane: 0.8m

TO SPECIFY

Recessed non-modular front (back) access T5 clean room luminaire for cut/prepared aperture ceilings. To a BSI tested and certified construction as IP65 frame on or off with fully welded body and front frame corners and triple contact welded TPR gasket. Concealed or no front frame fixings, suspension via solid aluminium jacking bracket adjusted from (inside – front access, outside – back access) the luminaire – as Whitecroft Lighting CURIE ELITE





DTFA elite – for modular ceilings

IP65/54 recessed luminaire with sealed twin frame construction

Optics

- Lamp options:
 - 4 x 14/24W T5
 - 2 or 4 x 28W T5
 - 2, 3 or 4 x 54W T5
- All optics are TP(a) rated:
 - Louvre above 4mm toughened glass or clear fireguard material
 - Prismatic acrylic above 4mm toughened glass
 - Single sheet 3mm prismatic fireguard material

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

- Front access only
- Welded steel body finished white
- Compatible with modular exposed T and spring T ceilings. Recessing panels are recommended on spring T ceilings to retain room integrity – Refer to page 310 for ceiling compatibility info
- 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 the T bar) and inner frame integrated in line but at an angle to eliminate a vertical gap. 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
- Robust extruded aluminium side arm cam brackets adjusted from outside the sealed body



DTFA elite – for modular ceilings

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ORDER CODES

Louvre above 4mm toughened glass	HF Gear	3 hr Emergency
T5 4 x 14W	DTFAWGH414	DTFAWGH414EMIN
T5 4 x 24W	DTFAWGH424	DTFAWGH424EMIN
T5 2 x 28W	DTFAWGH228	DTFAWGH228EMIN
T5 4 x 28W	DTFAWGH428	DTFAWGH428EMIN
T5 2 x 54W	DTFAWGH254	DTFAWGH254EMIN
T5 4 x 54W	DTFAWGH454	DTFAWGH454EMIN

Louvre above 3mm clear TP(a) rated sheet	HF Gear	3 hr Emergency
T5 4 x 14W	DTFAWFH414	DTFAWFH414EMIN
T5 4 x 24W	DTFAWFH424	DTFAWFH424EMIN
T5 2 x 28W	DTFAWFH228	DTFAWFH228EMIN
T5 4 x 28W	DTFAWFH428	DTFAWFH428EMIN
T5 2 x 54W	DTFAWFH254	DTFAWFH254EMIN
T5 4 x 54W	DTFAWFH454	DTFAWFH454EMIN

Prismatic acrylic above 4mm toughened glass	HF Gear	3 hr Emergency
T5 4 x 14W	DTFAAGH414	DTFAAGH414EMIN
T5 4 x 24W	DTFAAGH424	DTFAAGH424EMIN
T5 2 x 28W	DTFAAGH228	DTFAAGH228EMIN
T5 4 x 28W	DTFAAGH428	DTFAAGH428EMIN
T5 2 x 54W	DTFAAGH254	DTFAAGH254EMIN
T5 3 x 54W	DTFAAGH354	DTFAAGH354EMIN
T5 4 x 54W	DTFAAGH454	DTFAAGH454EMIN

Prismatic TP(a) single sheet	HF Gear	3 hr Emergency
T5 4 x 14W	DTFAKH414	DTFAKH414EMIN
T5 4 x 24W	DTFAKH424	DTFAKH424EMIN
T5 2 x 28W	DTFAKH228	DTFAKH228EMIN
T5 4 x 28W	DTFAKH428	DTFAKH428EMIN
T5 2 x 54W	DTFAKH254	DTFAKH254EMIN
T5 3 x 54W	DTFAKH354	DTFAKH354EMIN
T5 4 x 54W	DTFAKH454	DTFAKH454EMIN

Options

DALI DIMMING	Replace H with Y in order code	i.e. DTFAWGY414
DSI DIMMING	Replace H with D in order code	i.e. DTFAWGD414
SWITCH DIMMING	Replace H with X in order code	i.e. DTFAWGX414
EASYTEST	Add suffix /ET to order code	i.e. DTFAWGH414/ET
COMET	Add suffix /CT to order code	i.e. DTFAWGH414/CT

RECESSING PANEL to retain room integrity on spring T ceilings
14/24W lamps

28/54W twin lamp options

28/54W three and four lamp options

RP600x600

RP300x1200

RP600x1200

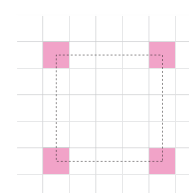


LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 14W T5	1200	24,000hrs
1 x 24W T5	1750	24,000hrs
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

PERFORMANCE GUIDE

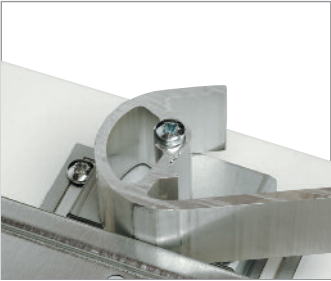
Lamps	Illuminance	Spacing
4 x 14W T5	465 lux	2.4m x 2.4m



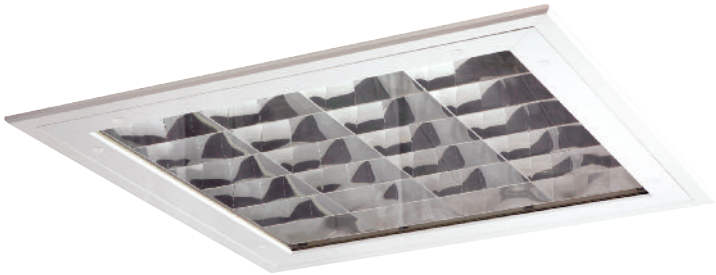
Maintenance:
0.8
Reflectance:
70/50/20
Ceiling Height:
2.7m
Working Plane:
0.8m

DTFA elite – for modular ceilings

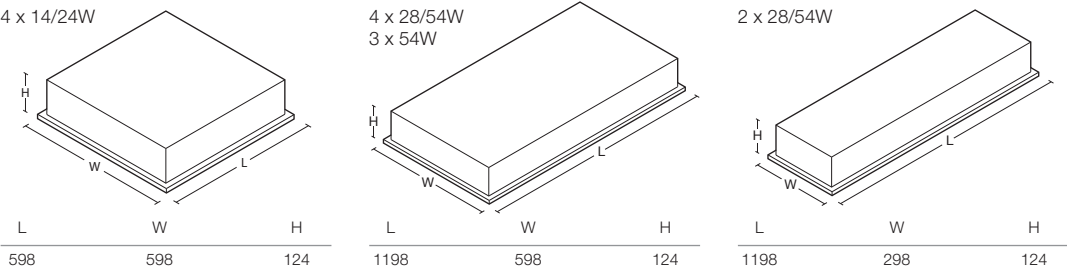
> weblink > DTFA



Cam jacking bracket



DIMENSIONS



CEILING INTEGRATION

Refer to common ceiling compatibility matrix – See page 310

Exposed T Grids

T15/T25 Pull up

Spring T Grids

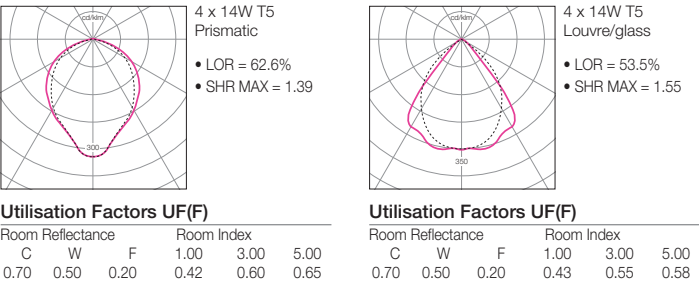
- SAS – 150/120
- Armstrong – Orcal 1800/3000
- Burgess – Clip in/Abar
- Dampa – Clip in

WEIGHT

	Louvre/ toughened glass	Louvre/TP(a) rated sheet	Acrylic/ toughened glass	Prismatic TP(a)
T5 4 x 14W	15.0 KG	13.0 KG	16.0 KG	11.0 KG
T5 4 x 24W	15.0 KG	13.0 KG	16.0 KG	11.0 KG
T5 2 x 28W	16.0 KG	14.0 KG	17.0 KG	12.0 KG
T5 4 x 28W	26.0 KG	20.0 KG	27.0 KG	18.0 KG
T5 2 x 54W	16.0 KG	14.0 KG	17.0 KG	12.0 KG
T5 3 x 54W	–	–	27.0 KG	18.0 KG
T5 4 x 54W	26.0 KG	20.0 KG	27.0 KG	18.0 KG

Note: Emergency luminaire are 1 KG heavier than the standard shown above

PHOTOMETRIC PERFORMANCE



TO SPECIFY

Recessed modular T5 clean room luminaire 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 – as Whitecroft Lighting DTFA ELITE T5





DTFN elite – for prepared aperture ceilings

IP65/54 recessed luminaire with sealed two frame construction

Optics

- Lamp options:
 - 4 x 14 or 24W T5
 - 2 or 4 x 28W T5
 - 2, 3 or 4 x 54W T5
- All optics are TP(a) rated:
 - Louvre above 4mm toughened glass or clear fireguard material
 - Prismatic acrylic above 4mm toughened glass
 - Single sheet 3mm prismatic fireguard material

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

- Front access or back access
- 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
- Through access version also available to facilitate maintenance of services located in the ceiling void (See page 226 for details)
- Welded steel body finished white
- Dual IP rated – to a BSI tested and certified construction as protecting the room to IP65 from void contamination with the front frame and IP54 with the frame removed
- Extruded aluminium fixed outer frame (gasketed to ceiling) and 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
- Solid aluminium side arm jacking brackets adjusted from within the sealed body (from the room above for back access versions)
- The diffuser clamping system is highly secure and will accept glass. The inner frame design facilitates diffuser replacement



DTFN elite – for prepared aperture ceilings

> weblink > **DTFN**

ORDER CODES

Louvre above 4mm toughened glass	HF Gear	3 hr Emergency
T5 4 x 14W	DTFNWGH414	DTFNWGH414EMIN
T5 4 x 24W	DTFNWGH424	DTFNWGH424EMIN
T5 2 x 28W	DTFNWGH228	DTFNWGH228EMIN
T5 4 x 28W	DTFNWGH428	DTFNWGH428EMIN
T5 2 x 54W	DTFNWGH254	DTFNWGH254EMIN
T5 4 x 54W	DTFNWGH454	DTFNWGH454EMIN

Louvre above 3mm clear TP(a) rated sheet	HF Gear	3 hr Emergency
T5 4 x 14W	DTFNWFH414	DTFNWFH414EMIN
T5 4 x 24W	DTFNWFH424	DTFNWFH424EMIN
T5 2 x 28W	DTFNWFH228	DTFNWFH228EMIN
T5 4 x 28W	DTFNWFH428	DTFNWFH428EMIN
T5 2 x 54W	DTFNWFH254	DTFNWFH254EMIN
T5 4 x 54W	DTFNWFH454	DTFNWFH454EMIN

Prismatic acrylic above 4mm toughened glass	HF Gear	3 hr Emergency
T5 4 x 14W	DTFNAGH414	DTFNAGH414EMIN
T5 4 x 24W	DTFNAGH424	DTFNAGH424EMIN
T5 2 x 28W	DTFNAGH228	DTFNAGH228EMIN
T5 4 x 28W	DTFNAGH428	DTFNAGH428EMIN
T5 2 x 54W	DTFNAGH254	DTFNAGH254EMIN
T5 3 x 54W	DTFNAGH354	DTFNAGH354EMIN
T5 4 x 54W	DTFNAGH454	DTFNAGH454EMIN

Prismatic TP(a) single sheet	HF Gear	3 hr Emergency
T5 4 x 14W	DTFNKH414	DTFNKH414EMIN
T5 4 x 24W	DTFNKH424	DTFNKH424EMIN
T5 2 x 28W	DTFNKH228	DTFNKH228EMIN
T5 4 x 28W	DTFNKH428	DTFNKH428EMIN
T5 2 x 54W	DTFNKH254	DTFNKH254EMIN
T5 3 x 54W	DTFNKH354	DTFNKH354EMIN
T5 4 x 54W	DTFNKH454	DTFNKH454EMIN

Options

DALI DIMMING	Replace H with Y in order code	i.e. DTFNWDY414
DSI DIMMING	Replace H with D in order code	i.e. DTFNWD414
SWITCH DIMMING	Replace H with X in order code	i.e. DTFNWDX414
EASYTEST	Add suffix /ET to order code	i.e. DTFNWDH414/ET
COMET	Add suffix /CT to order code	i.e. DTFNWDH414/CT
BACK ACCESS	Add suffix BA to order code	i.e. DTFNWDH414BA
	For emergency	i.e. DTFNWDH414BAEMIN

For ceilings up to 153mm thick (front access) and 170mm thick (back access)

DEEP CEILING BRACKET

14/24W lamps

28/54W lamps

150CBKT600

150CBKT1200

Ceiling Depth Selection Guide

	Standard Bracket	Optional Deep Bracket
Front Access	33-91mm	33-155mm
Back Access	52-108mm	52-172mm

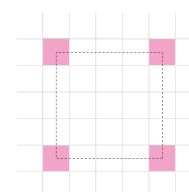


LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 14W T5	1200	24,000hrs
1 x 24W T5	1750	24,000hrs
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

PERFORMANCE GUIDE

Lamps	Illuminance	Spacing
4 x 14W T5	465 lux	2.4m x 2.4m



Maintenance:
0.8
Reflectance:
70/50/20
Ceiling Height:
2.7m
Working Plane:
0.8m

DTFN elite – for prepared aperture ceilings

> weblink > **DTFN**



Solid aluminium jacking bracket

DIMENSIONS

4 x 14/24W					4 x 28/54W					2 x 28/54W				
Version	L	W	H	Prepared Aperture	Version	L	W	H	Prepared Aperture	Version	L	W	H	Prepared Aperture
Front Access	603	725	124	555 x 677 ^{-0/+5}	Front Access	603	1325	124	555 x 1277 ^{-0/+5}	Front Access	370	1325	124	322 x 1277 ^{-0/+5}
Back Access	603	725	145	555 x 677 ^{-0/+5}	Back Access	603	1325	145	555 x 1277 ^{-0/+5}	Back Access	370	1325	145	322 x 1277 ^{-0/+5}

WEIGHT

	Louvre/ toughened glass	Louvre/TP(a) rated sheet	Acrylic/ toughened glass	Prismatic TP(a)
T5 4 x 14W	16.0 KG	14.0 KG	16.0 KG	12.0 KG
T5 4 x 24W	16.0 KG	14.0 KG	16.0 KG	12.0 KG
T5 2 x 28W	18.0 KG	15.0 KG	18.0 KG	13.0 KG
T5 4 x 28W	27.0 KG	21.0 KG	28.0 KG	19.0 KG
T5 2 x 54W	18.0 KG	15.0 KG	18.0 KG	13.0 KG
T5 3 x 54W	–	–	28.0 KG	19.0 KG
T5 4 x 54W	27 KG	21.0 KG	28.0 KG	19.0 KG

Note: Emergency luminaires are 1 KG heavier than the standard shown above
Weights are for front access luminaires

PHOTOMETRIC PERFORMANCE

4 x 14W T5
Prismatic

- LOR = 67.6%
- SHR MAX = 1.39

4 x 14W T5
Louvre/glass

- LOR = 57.8%
- SHR MAX = 1.55

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.46	0.65	0.70

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.47	0.60	0.63

TO SPECIFY

Recessed non-modular T5 clean room 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 solid aluminium jacking brackets adjusted from inside the luminaire (front access) or room above (back access) – as Whitecroft Lighting DTFN ELITE T5

lister

IP65 recessed luminaire with sealed single frame construction

> weblink > **LINK**

Optics

- Lamp options:
 - 4 x 14/24W T5
 - 2 or 4 x 28W T5
 - 2, 3 or 4 x 54W T5
- All optics are TP(a) rated:
 - Single sheet 3mm prismatic fireguard material

Body

- Front access only
- Compatible with modular exposed T25, spring T and prepared aperture ceilings. Recessing panels are recommended on spring T ceilings to retain room integrity
- Steel body finished white
- Extruded aluminium frame finished white
- Diffuser securely clamped but easily removable from frame for replacement
- IP65 rated – to a BSI tested and certified construction as protecting the room to IP65 from void contamination with the front frame in place. IP20 rating with the frame removed
- Rapid fix Lumafix sliding side support brackets adjusted from inside the body

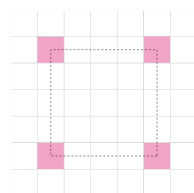


LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 14W T5	1200	24,000hrs
1 x 24W T5	1750	24,000hrs
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

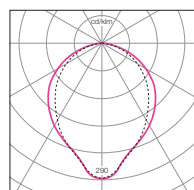
PERFORMANCE GUIDE

Lamps	Illuminance	Spacing
4 x 14W T5	500 lux	2.4m x 2.4m



Maintenance:
0.8
Reflectance:
70/50/20
Ceiling Height:
2.7m
Working Plane:
0.8m

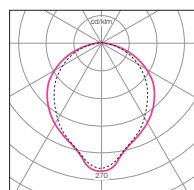
PHOTOMETRIC PERFORMANCE



4 x 14W T5
Prismatic
• LOR = 65.6%
• SHR MAX = 1.39

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.44	0.63	0.63



4 x 28W T5
Prismatic
• LOR = 64.3%
• SHR MAX = 1.42

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.43	0.62	0.66

ORDER CODES

Lister	HF Gear	3 hr Emergency
T5 4 x 14W	LISKH414	LISKH414EMIN
T5 4 x 24W	LISKH424	LISKH424EMIN
T5 2 x 28W	LISKH228	LISKH228EMIN
T5 4 x 28W	LISKH428	LISKH428EMIN
T5 2 x 54W	LISKH254	LISKH254EMIN
T5 3 x 54W	LISKH354	LISKH354EMIN
T5 4 x 54W	LISKH454	LISKH454EMIN

Options

DALI DIMMING	Replace H with Y in order code	i.e. LISK Y 414
DSI DIMMING	Replace H with D in order code	i.e. LISK D 414
SWITCH DIMMING	Replace H with X in order code	i.e. LISK X 414
EASYTEST	Add suffix /ET to order code	i.e. LISKH414/ ET
COMET	Add suffix /CT to order code	i.e. LISKH414/ CT
RECESSING PANEL To retain room integrity on spring T ceilings		
14/24W lamp options		RP600x600
28/54W twin lamp options		RP300x1200
28/54W three and four lamp options		RP600x1200

CEILING INTEGRATION

Refer to common ceiling compatibility matrix – See page 310

Exposed T Grids

T15/T25 Pull up

Spring T Grids

SAS – 150/120

Armstrong – Orcal 1800/3000

Burgess – Clip in/Abar

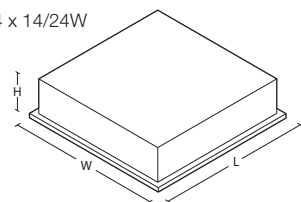
Dampa – Clip in

Plasterboard

Prepared aperture

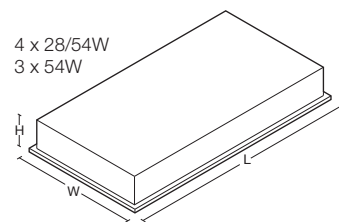
DIMENSIONS

4 x 14/24W



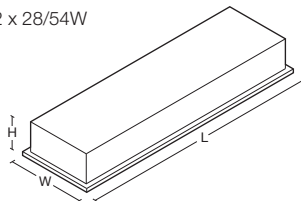
L	W	H	Prepared Aperture	KG	KG
599	599	111	575 x 575 ⁻⁰ ₊₅	11.0	12.0

4 x 28/54W
3 x 54W



L	W	H	Prepared Aperture	KG	KG
1199	599	111	1175 x 575 ⁻⁰ ₊₅	18.0	19.0

2 x 28/54W



L	W	H	Prepared Aperture	KG	KG
1199	299	111	1175 x 275 ⁻⁰ ₊₅	12.0	13.0

TO SPECIFY

Recessed modular T5 clean room luminaire to a BSI tested and certified construction as IP65 frame on with extruded aluminium frame, suspension via rapid fix Lumafix side support brackets adjusted from inside the luminaire – as Whitecroft Lighting LISTER



DTBY

IP65 surface mounted clean area luminaire

> weblink > **DTBY**

Optics

- Lamp options:
 - 2 x 28/54W T5
- Louvre above clear 3mm TP(a) sheet
- Single sheet 3mm prismatic TP(a) diffuser

Body

- Extruded aluminium frame finished white
- Designed to be mounted flush to the solid ceiling leaving no upward facing ledge. Mastic to be applied between luminaire and ceiling, washers to be fitted to seal drop rod holes if not used
- Diffuser securely clamped but easily removable from frame for replacement
- Steel body IP65 with fully welded corners finished white



ORDER CODES

DTBY Louvre	HF Gear	3 hr Emergency
T5 2 x 28W	DTBYWFH228	DTBYWFH228EMIN
T5 2 x 54W	DTBYWFH254	DTBYWFH254EMIN

DTBY Diffuser	HF Gear	3 hr Emergency
T5 2 x 28W	DTBYKH228	DTBYKH228EMIN
T5 2 x 54W	DTBYKH254	DTBYKH254EMIN

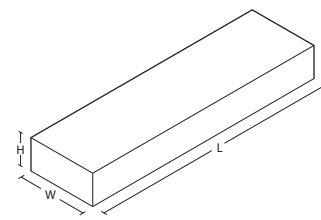
Options

DALI DIMMING	Replace H with Y in order code	i.e. DTBYWYF228
DSI DIMMING	Replace H with D in order code	i.e. DTBYWFD228
SWITCH DIMMING	Replace H with X in order code	i.e. DTBYWFX228
EASYTEST	Add suffix /ET to order code	i.e. DTBYWFH228/ET
COMET	Add suffix /CT to order code	i.e. DTBYWFH228/CT

LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

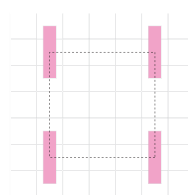
DIMENSIONS



L	W	H	KG	KG
1290	332	110	12.0	13.0

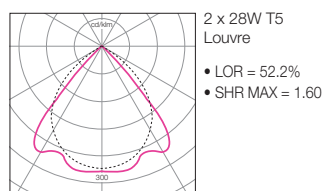
PERFORMANCE GUIDE

Lamps	Illuminance	Spacing
2 x 28W T5	480 lux	2.4m x 2.4m

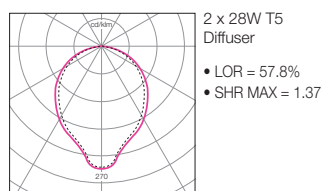


Maintenance:
0.8
Reflectance:
70/50/20
Ceiling Height:
2.7m
Working Plane:
0.8m

PHOTOMETRIC PERFORMANCE



Utilisation Factors UF(F)					
Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.42	0.54	0.56



Utilisation Factors UF(F)					
Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.39	0.56	0.60

TO SPECIFY

Surface T5 clean room luminaire in 0.9mm gauge steel with fully welded corners, IP65 when the flat back is mastic sealed tight to the ceiling and fixing holes sealed with washers, extruded aluminium frame – as Whitecroft Lighting DTBY

lamina

IP20 surface mounted teardrop clean area luminaire



Optics

- Lamp options:
 - 1 x 28/54W T5
- UV absorbent internally reeded DEGALON diffuser (but if certain wavelengths of light must be removed for photosensitive applications the lamp must be appropriately UV sleeved, the diffuser dimensions accommodate this)

Body

- Extruded aluminium body finished white
- Push fit Wieland connectors for rapid maintenance and assembly
- The 50mm wide body can be mounted directly on proprietary T bars of 50mm wide or greater with minimal disturbance to uni-directional airflow – independently tested by Diamond Scientific Limited
- Single (with knock out hole for end of row) and double (with cable hole for between 2 luminaires) moulded ABS end-caps
- Individual or continuous mounting (using appropriate connecting kit). Supply via knock out hole in end cap or via T bar cruciform into back of body – up to 30 luminaires off one feed



lamina

> weblink > LAM

ORDER CODES

Lamina Bodies	HF Gear	3 hr Emergency
T5 1 x 28W	LAMD128	LAMD128EMIN
T5 1 x 54W	LAMD154	LAMD154EMIN

Lamina Connecting Kits

INTERMEDIATE KIT	Double end cap with connecting cable	LAMIK
END KIT	2 x single end caps with cable	LAMEK

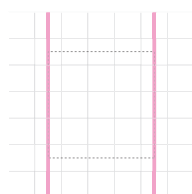
Note: End kit is required for individually mounted luminaires

LAMP PERFORMANCE

Wattage	IL@25°C	Lamp Life
1 x 28W T5	2600	24,000hrs
1 x 54W T5	4450	24,000hrs

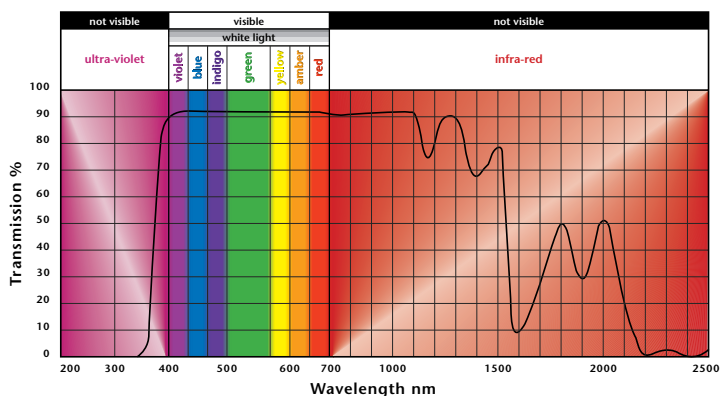
PERFORMANCE GUIDE

Lamps	Illuminance	Spacing
1 x 54W T5	900 lux	2.4m x continuous

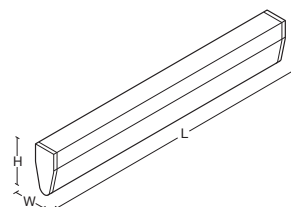


Maintenance:
0.8
Reflectance:
70/50/20
Ceiling Height:
2.7m
Working Plane:
0.8m

UV TRANSMISSION

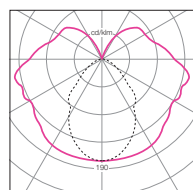


DIMENSIONS

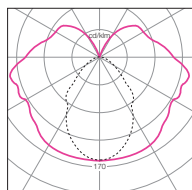


Version	L	W	H	KG
Standard	1200	50	115	3.5
Emergency	1500	50	115	4.5

PHOTOMETRIC PERFORMANCE



1 x 28W T5
• LOR = 98.1%
• SHR MAX = 1.66



1 x 54W T5
• LOR = 88.3%
• SHR MAX = 1.66

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.52	0.79	0.87

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.47	0.71	0.78

TO SPECIFY

Surface T5 teardrop luminaire with UV absorbent Degalon diffuser independently tested for minimum disturbance to uni-directional airflow. Extruded aluminium body, rapidly detachable gear-tray on turnbuckles, push fit Wieland connectors and moulded ABS end-caps. Width not to exceed 50mm and overall depth 115mm – as Whitecroft Lighting LAMINA