

Clean area: IP65/65 modular and non-modular Ex e recessed ATEX Category 2, Zone 1 application, clean room luminaires

Whitecroft
lighting

Curie and Jenner Ex e Hazardous

MOTIVATION

There is a requirement in the pharmaceutical industry for a purpose designed luminaire, not only satisfying the most exacting clean room requirements but also suitable for environments containing hazardous materials, such as volatile powders and solvents.

In developing the Curie and Jenner Ex e luminaires, Whitecroft and Chalmers lighting have combined their expertise in clean areas and hazardous environments respectively, to produce two ranges of luminaires truly fit for purpose.

APPLICATION

Clean Room

- Both ranges as IP65/65 are suitable for any class of clean room or containment facility, subject to ceiling type
 - Curie (cut aperture)
 - Jenner (modular XT and ST)
- Zone 1 and Zone 2 areas to EN 60079-10 and EN 50281-3 with installation to EN 60079-14 and EN 50281-1-2

SPECIFICATION

The following data applies to both Curie and Jenner Certification

Type of protection – Ex eqm (Increased safety, Powder filling encapsulation) Dust protected enclosure

ATEX classification – Group II Category 2 G D

Area classification – Zone 1 and Zone 2 areas to EN 60079-10 and EN 50281-3 with installation to EN 60079-14 and EN 50281-1-2

Apparatus standard – EN50014, EN50017, EN50019, EN50028

Certificate – EC Type Examination Certificate Baseefa 02ATEX0117X

Coding – Ⓔ II 2 G D Ex eqm II T4 Tamb 50°C

Body and Frame

- Dual IP rated. IP65 to the void is retained with the frame either on or off. Body and frame corners are fully welded and finished to a smooth finish
- Bodies in 0.9mm zinc steel, frames in extruded aluminium, both painted to a depth of 120 micron stoved hard at 160-180°C for durable protection
- Visible frame finished RAL 9016
- Optics – 4 options; 3mm clear and 3mm prismatic polycarbonate (CP), 4mm toughened glass and 3mm prismatic acrylic (TA), clear polycarbonate (CW) or toughened glass (TW) with Cat 2 louvre. (Reference appears in product code)
- Smooth, easily cleanable face always room-side. All options are Tp(a) 850°C fire rated
- Side support brackets in extruded aluminium assist in pulling up the luminaire to ensure the required compression of seals against the ceiling
- High frequency gear (and integral emergency when required) is mounted on a detachable gear tray
- Electrical supply 220-



Jenner Hazardous



Curie Hazardous

254V 50/60Hz can also be 220-300V dc (non emergency only)

- 3 hour emergency option. Output 30% of one lamp – 18W and 25% of one lamp 36W
- Battery management monitoring and automatic self test
- Supplied without lamps (4000°K tri-phosphor recommended for clean areas)

Curie only – cut aperture

- 3 point TPR gasket integrated in frame periphery to cope with irregularities in non-modular cut aperture

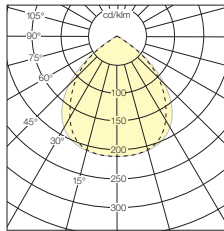
ceilings. Fixing range from the underside of the ceiling 32-102mm

- Solid extruded aluminium jacking brackets adjusted using the nuts under the step inside the fully sealed body
- Concealed front frame fixings for a highly cleanable front face

Jenner only – exposed or spring T

- Pivoting extruded aluminium cam profile side suspension arms are fitted, adjusted and screwed and locked in position from outside the sealed body
- Closed cell gaskets are employed throughout

Curie Hazardous
TOUGHENED GLASS & PRISMATIC ACRYLIC
4 x 18W T8

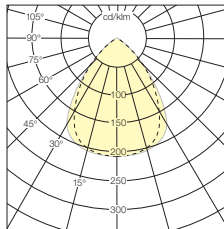


- SHR MAX = 1.69
- LOR = 0.49

UTILISATION FACTORS UF(F) SHR NOM = 1.50
Room Reflectance Room Index.....

C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
0.70	0.50	0.20	0.34	0.38	0.41	0.43	0.46	0.48	0.50	0.51	0.52
0.50	0.30	0.20	0.30	0.34	0.73	0.40	0.43	0.45	0.46	0.48	0.49
0.00	0.00	0.00	0.27	0.31	0.37	0.36	0.39	0.40	0.42	0.43	0.45

Jenner Hazardous
CLEAR POLYCARB & PRISMATIC POLYCARB
4 x 18W T8



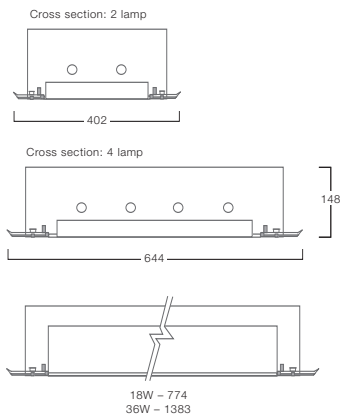
- SHR MAX = 1.66
- LOR = 0.42

UTILISATION FACTORS UF(F) SHR NOM = 1.50
Room Reflectance Room Index.....

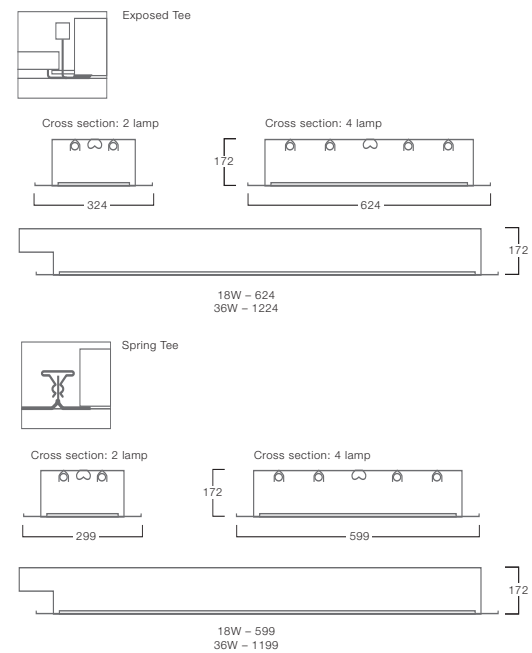
C	W	F	0.75	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0
0.70	0.50	0.20	0.30	0.33	0.36	0.38	0.40	0.41	0.42	0.44	0.45
0.50	0.30	0.20	0.28	0.30	0.33	0.35	0.37	0.38	0.40	0.41	0.42
0.00	0.00	0.00	0.25	0.28	0.30	0.32	0.34	0.35	0.36	0.37	0.38

DIMENSIONS

Curie Hazardous



Jenner Hazardous



Curie and Jenner Hazardous

ORDER CODES

CLEAN AREA: IP65/65 MODULAR AND NON-MODULAR HAZARDOUS CLEAN ROOM

BASE ORDER CODE	SUPPLIED LESS LAMP	CUT APERTURES
Curie Non-Modular/cut aperture	4000K tri-phosphor recommended	
CUEZ - - 418	4 x 18W	580 x 710mm
CUEZ - - 236	2 x 36W	338 x 1319mm
CUEZ - - 436	4 x 36W	580 x 1319mm
Jenner Modular exposed and spring T		
JNEZ - - 418 ##	4 x 18W	
JNEZ - - 236 ##	2 x 36W	
JNEZ - - 436 ##	4 x 36W	

OPTIC NEEDED – In place of - - in base order code insert optic required, all are Tp(a) 850°C fire rated.

CP – Clear flat polycarbonate sheet below a prismatic polycarbonate sheet.

CW – Clear flat polycarbonate sheet below a Cat 2 louvre.

TA – 4mm flat toughened glass below a prismatic acrylic sheet.

TW – 4mm flat toughened glass below a Cat 2 louvre.

If there is a concern chemicals may be present which could attack polycarbonate either use toughened glass or check with the Whitecroft technical helpline.

CEILING TYPE – In place of ##, please insert

XT – if the modular ceiling is exposed T25

ST – if the modular ceiling is spring T

RECESSED PANEL – for Jenner Hazardous only

R – add R to the order codes i.e. JNEZST418CPR

For Spring Tee, a clip-in recessed sealing ring is advised when void to room integrity is important.

EMERGENCY – Add suffixes to the end of the above order codes in the order listed

E3 – 3 hour integral emergency complete with battery management and automatic self test as standard

To specify state:

Curie – Recessed non-modular clean area luminaire for cut/prepared aperture ceilings. BSI tested and certified to IP65 front frame on or off. ATEX classification – Group II Category 2 G D, type of protection Ex eqm. Suspension via swing out jacking brackets adjusted from inside the luminaire, 3 point TPR gasket to ceiling – as Whitecroft Lighting CURIE HAZARDOUS

Jenner – Recessed modular clean area luminaire for T25 exposed T and spring T ceilings. IP65 front frame on or off. ATEX classification – Group II Category 2 G D, type of protection Ex eqm. Suspension via aluminium cam brackets adjusted from outside the luminaire – as Whitecroft Lighting JENNER HAZARDOUS

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