

Lighting: LED High Bay Lighting Fixture, DFDR1 Series

Flameproof/ Increased Safety and Dust protection by enclosure

Zone 1 & 2 – 21 & 22



Application

The DFDR1 series is suitable for Zone 1 & Zone 2 (Ex-gas) and Zone 21 & Zone 22 (Ex-dust) hazardous areas, such as chemical and petrochemical facilities, offshore platforms, shipyards, electric power stations, loading docks, and wastewater treatment plants, etc.

Specification

Body material	: Marine grade copper-free aluminium alloy with polyester powder coated, RAL 7032 (grey) (optional offshore painting-acrylic polyurethane coating)
Lens	: Heat and high impact resistant clear glass (4J impact)
Bolts	: Stainless steel, SS 304 (optional SS 316)
Bracket	: Hot-dip galvanized steel (optional SS 304 or SS 316)
Sealing (O-ring)	: Silicone

Product Features

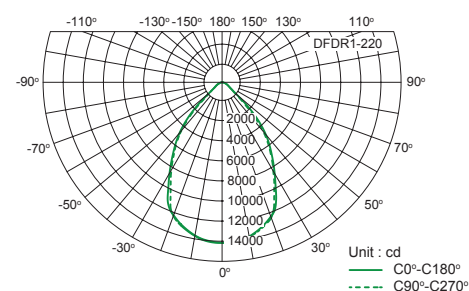
Luminous efficacy	: 117 lm/W
Colour temperature	: Standard 5,700 K (daylight) (optional 2,700 K; 3,000 K; 3,500 K; 4,000 K; 5,000 K; 6,500 K etc.)
Colour Rendering Index (Ra)	: ≥ 80
Chip	: LUXEON 5050 - LumiLEDs (optional Cree, Bridgelux, Nichia)
Beam angle	: Average 115-120° without lens with lens 30-100 W; 60° 110-240 W; 30°, 60°, 90° (other beam angle, please specify)

Fixture Life

- L70 - Rated lifetime of 60,000 hours at ambient temperatures of 85°C.
- L80 - Rated lifetime of 43,318 hours at ambient temperatures of 85°C.
- L90 - Rated lifetime of 20,534 hours at ambient temperatures of 85°C.



Luminous Intensity Distribution Curve



Complete photometrics, please contact us.

Technical Data

Hazardous Area	Gas	Dust
Zones	1 & 2	21 & 22
Equipment Group/Category	Ex db eb IIC T6..T4 Gb	Ex tb IIIC T85°C..T135°C Db
Symbol of Protection		
Certificate	LOM 21 ATEX 1018X	
Conformity to Standards	EN IEC 60079-0, EN 60079-1, EN IEC 60079-7, EN IEC 60079-31	
Ambient Temperature	-20°C to +60°C	
Index of Protection	IP66/ IK10	
Entry Threads	2x M20x1.5, 2x M25x1.5 (1-stopping plug) or 2x 1/2" NPT, 2x 3/4" NPT (1-stopping plug)	
Mounting	Bracket mounting	
Connection	L, N and PE ; for 1-4 mm² cable (Through wiring system with an extra terminal block for cable connection at both ends.)	
Rated Voltage	110-240 V AC, 50/60 Hz, P.F. ≥ 0.95	

Catalogue Number Logic

DFDR1 -	■ ■ ■	-	□ □	-	○
Series	LED power (see ordering requirement table below)		Entry threads		Option
M1	M20x1.5	N1	1/2" NPT	G	Guard
M2	M25x1.5	N2	3/4" NPT		

Ordering Requirements

Cat. No.	LED power	Voltage	Temp. Class (for zone 1 & 2)		Max. Surface Temp.* (for zone 21 & 22)		Approx. weight (kg)
			Ta 40°C	Ta 60°C	Ta 40°C	Ta 60°C	
DFDR1-30 - □ □ - □	30 W	110-240 V AC, 50/60 Hz	T6	T6	T85°C	T85°C	10.5
DFDR1-40 - □ □ - □	40 W						
DFDR1-50 - □ □ - □	50 W						
DFDR1-60 - □ □ - □	60 W						
DFDR1-70 - □ □ - □	70 W						
DFDR1-80 - □ □ - □	80 W						
DFDR1-90 - □ □ - □	90 W						
DFDR1-100 - □ □ - □	100 W		T5	T4	T100°C	T135°C	12.5
DFDR1-110 - □ □ - □	110 W		T5	T4	T100°C	T135°C	22.0
DFDR1-120 - □ □ - □	120 W						
DFDR1-130 - □ □ - □	130 W						
DFDR1-140 - □ □ - □	140 W						
DFDR1-150 - □ □ - □	150 W						
DFDR1-160 - □ □ - □	160 W						
DFDR1-170 - □ □ - □	170 W						
DFDR1-180 - □ □ - □	180 W						
DFDR1-190 - □ □ - □	190 W						
DFDR1-200 - □ □ - □	200 W						
DFDR1-210 - □ □ - □	210 W						
DFDR1-220 - □ □ - □	220 W						
DFDR1-230 - □ □ - □	230 W						
DFDR1-240 - □ □ - □	240 W						

Remark * : The maximum surface temperatures are specified for dust free condition. The dust layer which may cover around the lighting fixture will cause higher surface temperature.

Dimensions

LED power	Dimensions in mm			
	a	b	Øc	d
30 W to 90 W	273	306	254	314
100 W	265	341	254	331
110 W to 240 W	278	389	338	401