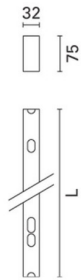
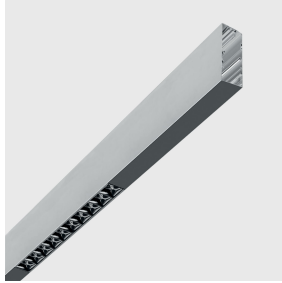


Last information update: August 2025

Product configuration: R649

R649: High Contrast module L=1462 - direct emission with controlled glare - LED - neutral white integrated DALI dimmable control gear

**Product code**

R649: High Contrast module L=1462 - direct emission with controlled glare - LED - neutral white integrated DALI dimmable control gear

Technical description

direct emission modular lighting system. High Contrast module with 2 groups of 10 elements using fixed optic LED lamps - flood beam angle. The structure of the optical system produces light emission with controlled glare (UGR < 19). Minimal (frameless) version extruded aluminium profile; partial black methacrylate screens set up for connection to end caps on both sides. Installation can be surface-mounted (ceiling/wall), or pendant. The module must be completed with the accessories kit needed for the selected type of installation. DALI dimmable electronic control gear integrated in the luminaire. Neutral white high efficiency LED.

Installation

pendant: complete with power supply unit with cable (MWG5) and suspension cables (MWG6); surface-mounted: complete with supports (MWG7).

Colour

White (01) | Black (04) | Aluminium (12)

Weight (Kg)

3

Mounting

ceiling recessed|ceiling surface|ceiling pendant

Wiring

the module is fitted with 5-pin terminal blocks for pass-through wiring at the ends. DALI dimmable control gear integrated in the module.

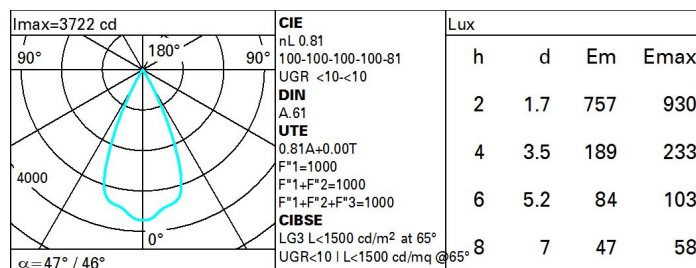
Notes

High Contrast modules may be completed with accessory end caps (code MX80) and used independently in the various applications. To make continuous lines, use accessory code MX81 with partial screen suitable for overlapping with other modules. Possibility of combined High Contrast / Low Contrast
TPb rated.

Complies with EN60598-1 and pertinent regulations

**Technical data**

Im system:	3888	MacAdam Step:	3
W system:	46.3	Life Time LED 1:	> 50,000h - L90 - B10 (Ta 25°C)
Im source:	2400	Lamp code:	LED
W source:	20	Number of lamps for optical assembly:	1
Luminous efficiency (Im/W, real value):	84	ZVEI Code:	LED
Im in emergency mode:	-	Number of optical assemblies:	2
Total light flux at or above an angle of 90° [Lm]:	0	Power factor:	See installation instructions
Light Output Ratio (L.O.R.) [%]:	81	Inrush current:	29 A / 180 µs
Beam angle [°]:	47° / 46°	Minimum dimming %:	1
CRI (minimum):	90	Overvoltage protection:	2kV Common mode & 1kV Differential mode
CRI (typical):	92	Control:	DALI-2
Colour temperature [K]:	4000		

Polar

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	73	70	67	65	69	66	66	64	78
1.0	76	73	71	69	72	70	70	67	83
1.5	80	78	76	74	77	75	74	72	89
2.0	83	81	79	78	80	78	78	75	93
2.5	84	83	82	81	82	81	80	78	96
3.0	85	84	83	83	83	82	81	79	98
4.0	86	85	85	84	84	84	82	81	99
5.0	87	86	86	86	85	84	83	81	100

UGR diagram

Corrected UGR values (at 2400 lm bare lamp luminous flux)											
Reflect.:		viewed crosswise					viewed endwise				
ceiling/cav		0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
walls		0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
work pl.		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Room dim											
x	y										
2H	2H	1.0	1.5	1.3	1.7	2.0	1.0	1.5	1.3	1.7	2.0
	3H	0.9	1.3	1.2	1.6	1.9	0.9	1.3	1.2	1.6	1.9
	4H	0.8	1.2	1.2	1.5	1.8	0.8	1.2	1.1	1.5	1.8
	6H	0.7	1.1	1.1	1.4	1.8	0.7	1.1	1.1	1.4	1.7
	8H	0.7	1.1	1.1	1.4	1.7	0.7	1.1	1.1	1.4	1.7
	12H	0.7	1.0	1.0	1.4	1.7	0.7	1.0	1.0	1.4	1.7
4H	2H	0.8	1.2	1.1	1.5	1.8	0.8	1.2	1.2	1.5	1.8
	3H	0.7	1.0	1.0	1.4	1.7	0.7	1.0	1.0	1.4	1.7
	4H	0.6	0.9	1.0	1.2	1.6	0.6	0.9	1.0	1.2	1.6
	6H	0.5	0.8	0.9	1.2	1.6	0.5	0.8	0.9	1.2	1.6
	8H	0.4	0.7	0.9	1.1	1.5	0.4	0.7	0.9	1.1	1.5
	12H	0.4	0.6	0.8	1.0	1.5	0.4	0.6	0.8	1.0	1.5
8H	4H	0.4	0.7	0.9	1.1	1.5	0.4	0.7	0.9	1.1	1.5
	6H	0.3	0.6	0.8	1.0	1.5	0.4	0.6	0.8	1.0	1.5
	8H	0.3	0.5	0.8	0.9	1.4	0.3	0.5	0.8	0.9	1.4
	12H	0.2	0.4	0.7	0.9	1.4	0.2	0.4	0.7	0.9	1.4
12H	4H	0.4	0.6	0.8	1.0	1.5	0.4	0.6	0.8	1.0	1.5
	6H	0.3	0.5	0.8	0.9	1.4	0.3	0.5	0.8	0.9	1.4
	8H	0.2	0.4	0.7	0.9	1.4	0.2	0.4	0.7	0.9	1.4
Variations with the observer position at spacing:											
S =		1.0H	6.8 / -21.9				6.8 / -21.9				
		1.5H	9.7 / -22.0				9.7 / -22.0				
		2.0H	11.7 / -22.2				11.7 / -22.2				