

Last information update: March 2025

Product configuration: PH21.G1

PH21.G1: Module for Superrail 48V track - BLE Casambi - UGR<19 - L=1824 - Continuous line - 14.5W 1785lm - 2700K - CRI 90 - Black/Black Transparent

**Product code**

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Technical description

Linear lighting product with 2700K CRI90 monochrome LED complete with adapter for installation on a Superrail 48V track. Module for continuous line not including caps (to be ordered separately). UGR<19 luminaire with controlled luminance ($L \leq 3000 \text{ cd/m}^2$) ideal for environments with video screen use. Opti-Diamond Space optic available in a White Cover (Transparent white) or Black Cover (Transparent black) version. Frameless version main body made of extruded aluminium. A rapid tool-free system for connecting the adapter electrically and mechanically to the track. The adapter made of a thermoplastic material includes the DC/DC driver circuit and Bluetooth protocol. Integrated «Bluetooth Casambi» technology allows each light module inserted on the track to be adjusted independently. Bluetooth Low Energy (Casambi) technology. Frequency 2.4 GHz BLE. The luminaire can be controlled with the Casambi App that enables on-off, dimming and scene recall functions. The app is available on the Apple Store and Google Play Store. It can be integrated in the system's "Mesh" network that allows multiple luminaires to be controlled. OTA (over the air) update via app. Integrated Beacon that can be activated via Smart Light Control (iBeacon) that enables functions including push notification and indoor navigation-wayfinding.

Installation

An adapter is used to fix the device mechanically and tool-free to the 48V track. Max luminaire-luminaire distance (*): 8 m; max smartphone-luminaire distance (*): 20 m. Close the continuous line with a pair of caps to be ordered separately

Colour

Black/Black Transparent (G1)

Weight (Kg)

1.03

Mounting

Low voltage track

Wiring

Direct connection on 48V track. Track power supply unit to be ordered separately. Luminaire that can be controlled with Bluetooth technology (Casambi).

Notes

(*) The maximum distance for Bluetooth installations is affected by physical obstacles, like walls, metal panels and the layout of the system. We suggest that a test is conducted at the installation site. Technical and anti-glare accessories available; with option of the combined installation of two internal accessories.

Complies with EN60598-1 and pertinent regulations

**Technical data**

Im system:	1617	Life Time LED 1:	> 50,000h - L90 - B10 (Ta 25°C)
W system:	14.5	Voltage [Vin]:	48
Im source:	2100	Lamp code:	LED
W source:	13	Number of lamps for optical assembly:	1
Luminous efficiency (Im/W, real value):	111.5	ZVEI Code:	LED
Im in emergency mode:	-	Number of optical assemblies:	1
Total light flux at or above an angle of 90° [Lm]:	31	LED current [mA]:	39
Light Output Ratio (L.O.R.) [%]:	77	Power factor:	See installation instructions
CRI (minimum):	90	Minimum dimming %:	1
Colour temperature [K]:	2700	Control:	Casambi
MacAdam Step:	3		

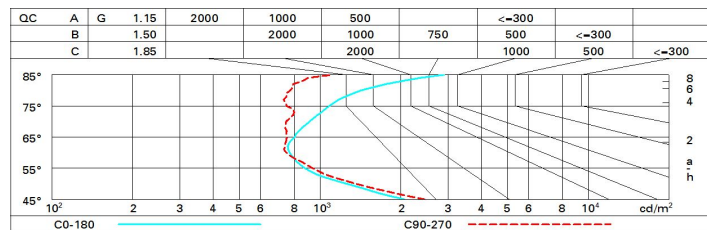
Polar

	CIE nL 0.77 94-99-99-98-77 UGR 13.2-12.6 DIN A.61 UTE 0.76A+0.01T F*1=940 F*1+F*2=985 F*1+F*2+F*3=994 CIBSE LG3 L<3000 cd/m² at 65° UGR<16 L<3000 cd/mq @65°				
	h	d1	d2	Em	E _{max}
	2	2.3	2.3	327	415
	4	4.6	4.6	82	104
	6	6.9	6.9	36	46
	8	9.2	9.2	20	26

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	67	63	60	58	62	59	59	56	74
1.0	70	66	64	62	65	63	63	60	79
1.5	74	71	69	67	70	68	67	65	86
2.0	77	75	73	72	73	72	71	68	90
2.5	78	77	75	74	75	74	73	71	93
3.0	80	78	77	76	77	76	75	72	96
4.0	81	80	79	78	78	77	76	74	97
5.0	81	80	80	79	79	78	77	74	99

Luminance curve limit



UGR diagram

Corrected UGR values (at 2100 lm bare lamp luminous flux)											
Reflect.: ceiling/cav walls work pl. Room dim x y		0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
		0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		viewed crosswise					viewed endwise				
2H	2H	13.0	13.6	13.3	13.9	14.1	12.9	13.5	13.2	13.8	14.1
	3H	13.0	13.5	13.3	13.8	14.1	12.8	13.3	13.2	13.6	14.0
	4H	13.0	13.5	13.3	13.8	14.1	12.8	13.2	13.1	13.6	13.9
	6H	13.1	13.5	13.4	13.9	14.2	12.7	13.1	13.1	13.5	13.8
	8H	13.2	13.6	13.5	14.0	14.3	12.6	13.1	13.0	13.4	13.8
	12H	13.3	13.7	13.7	14.1	14.5	12.6	13.0	13.0	13.4	13.8
4H	2H	12.8	13.3	13.2	13.6	14.0	12.9	13.4	13.2	13.7	14.0
	3H	12.8	13.2	13.2	13.6	14.0	12.8	13.2	13.2	13.6	14.0
	4H	12.9	13.2	13.3	13.6	14.0	12.7	13.1	13.1	13.5	13.9
	6H	13.0	13.4	13.5	13.8	14.2	12.7	13.0	13.1	13.4	13.9
	8H	13.2	13.5	13.7	13.9	14.4	12.6	12.9	13.1	13.4	13.9
	12H	13.5	13.8	14.0	14.2	14.7	12.6	12.9	13.1	13.3	13.8
8H	4H	12.8	13.1	13.3	13.5	14.0	12.7	13.0	13.2	13.5	14.0
	6H	13.1	13.3	13.6	13.8	14.3	12.8	13.0	13.3	13.5	14.0
	8H	13.3	13.5	13.8	14.0	14.6	12.8	13.0	13.3	13.5	14.0
	12H	13.8	14.0	14.3	14.5	15.1	12.8	13.0	13.3	13.5	14.1
12H	4H	12.7	13.0	13.2	13.5	14.0	12.8	13.1	13.3	13.5	14.0
	6H	13.0	13.3	13.6	13.8	14.3	12.8	13.0	13.3	13.5	14.1
	8H	13.4	13.5	13.9	14.1	14.6	12.9	13.1	13.4	13.6	14.1
Variations with the observer position at spacing:											
S =	1.0H	3.4 / -3.0					4.0 / -4.7				
	1.5H	5.8 / -3.2					6.6 / -5.0				
	2.0H	7.7 / -3.4					8.6 / -5.1				