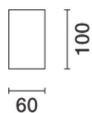


Last information update: May 2024

Product configuration: N964+N978.01

N964: Initial profile L 2397

N978.01: LED module - L 1196 - dark-light emission - warm white - integrated DALI dimmable control gear - 53W 7000lm - 3000K - White

**Product code**

N964: Initial profile L 2397 **Attention! Code no longer in production**

Technical description

Minimal (frameless) version extruded aluminium initial profile for up-down emission; a double length version designed to house 2 x up-down emission LED plates. Complete with superpure aluminium lamellar optic screen with an anodised mirror finish. Controlled luminance down emission $L \leq 1500 \text{ cd/mq2}$ - $\alpha > 65^\circ$. PMMA diffusing screens for upper emission.

Installation

Installation can be pendant-mounted using suitable accessories to be ordered separately. The initial modules can be used individually for various applications if completed with end caps and the required LED module.

Colour

Aluminium (12)

Mounting

ceiling pendant

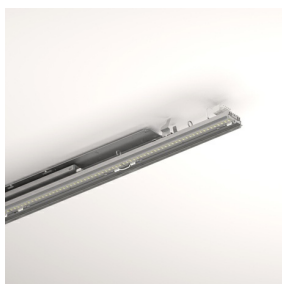
Wiring

Set up to house the up-down LED modules required by the system.

Notes

Take care with the system configuration. To make continuous lines of lighting, use the intermediate modules. To complete a continuous line correctly there must always be an initial module at the start or end of the composition.

Complies with EN60598-1 and pertinent regulations

**Product code**

N978.01: LED module - L 1196 - dark-light emission - warm white - integrated DALI dimmable control gear - 53W 7000lm - 3000K - White **Attention! Code no longer in production**

Technical description

LED module set up for housing in iN60 Dark Light up-down emission system initial or intermediate profiles. Extruded aluminium heat sink linear element. Combined with the lamellar optic screen housed in the system profiles, the luminaire generates a down emission (85%) with controlled luminance $L \leq 1500 \text{ cd/m2}$ - $\alpha > 65^\circ$, for use in environments with video monitors in compliance with EN 12464-1. Diffused up emission (15%). Supplied with integrated dimmable DALI control gear. Warm white LED.

Installation

Module insertion on profiles with a mechanical easy-push system (steel snap-on spring).

Colour

White (01)

Weight (Kg)

1.75

Wiring

Quick coupling input/output terminal block connection to simplify connections between the luminaires. LED module complete with integrated DALI control gear.

Complies with EN60598-1 and pertinent regulations

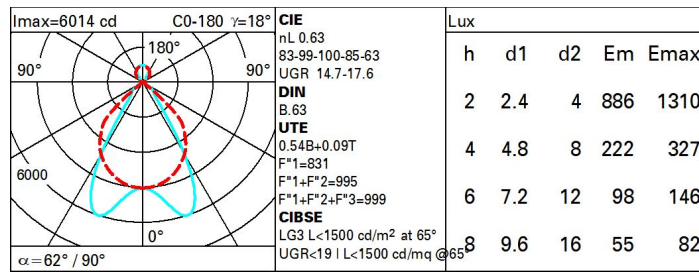


IP20

**Technical data**

lm system:	8819	CRI:	80
W system:	120.2	Colour temperature [K]:	3000
lm source:	14000	MacAdam Step:	3
W source:	106	Life Time LED 1:	50,000h - L80 - B10 (Ta 25°C)
Luminous efficiency (lm/W, real value):	73.4	Lamp code:	LED
lm in emergency mode:	-	Number of lamps for optical assembly:	1
Total light flux at or above an angle of 90° [Lm]:	1300	ZVEI Code:	LED
Light Output Ratio (L.O.R.) [%]:	63	Number of optical assemblies:	1

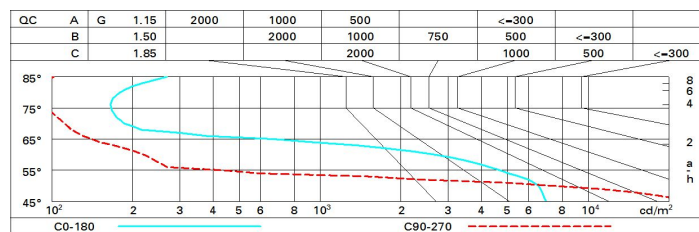
Polar



Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	48	44	41	39	42	40	39	35	66
1.0	52	48	45	43	46	44	42	39	72
1.5	56	53	51	49	51	49	47	44	81
2.0	59	56	55	53	54	53	51	47	87
2.5	60	58	57	56	56	55	53	49	91
3.0	61	60	58	57	57	56	54	50	93
4.0	62	61	60	59	58	57	55	51	95
5.0	63	62	61	60	59	58	56	52	96

Luminance curve limit



UGR diagram

Corrected UGR values (at 14000 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	0.30
		0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30	0.30
		0.20	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	15.4	16.0	15.9	16.5	17.0	18.3	19.0	18.8	19.4	19.9	
	3H	15.2	15.8	15.8	16.3	16.8	18.2	18.7	18.7	19.2	19.8	
	4H	15.1	15.6	15.7	16.1	16.7	18.1	18.6	18.7	19.1	19.7	
	6H	15.0	15.5	15.6	16.0	16.6	18.0	18.5	18.6	19.0	19.6	
	8H	15.0	15.4	15.6	16.0	16.6	18.0	18.4	18.5	19.0	19.6	
	12H	14.9	15.4	15.5	15.9	16.6	17.9	18.3	18.5	18.9	19.5	
4H	2H	15.1	15.6	15.7	16.2	16.8	18.1	18.6	18.6	19.1	19.7	
	3H	15.0	15.4	15.6	16.0	16.6	17.9	18.3	18.5	18.9	19.5	
	4H	14.9	15.2	15.5	15.8	16.5	17.8	18.2	18.4	18.8	19.4	
	6H	14.7	15.1	15.4	15.7	16.4	17.7	18.0	18.3	18.6	19.3	
	8H	14.7	15.0	15.3	15.6	16.3	17.6	17.9	18.3	18.6	19.3	
	12H	14.6	14.9	15.3	15.6	16.3	17.6	17.8	18.3	18.5	19.2	
8H	4H	14.7	15.0	15.3	15.6	16.3	17.6	17.9	18.3	18.6	19.3	
	6H	14.6	14.8	15.3	15.5	16.2	17.5	17.8	18.2	18.4	19.2	
	8H	14.5	14.7	15.2	15.4	16.2	17.5	17.7	18.2	18.4	19.1	
	12H	14.5	14.6	15.2	15.3	16.1	17.4	17.6	18.1	18.3	19.1	
12H	4H	14.6	14.9	15.3	15.5	16.3	17.6	17.8	18.3	18.5	19.2	
	6H	14.5	14.7	15.2	15.4	16.2	17.5	17.7	18.2	18.4	19.1	
	8H	14.5	14.6	15.2	15.3	16.1	17.4	17.6	18.1	18.3	19.1	
Variations with the observer position at spacing:												
S =		1.0H	3.1 / -3.6		2.7 / -20.6							
		1.5H	3.9 / -9.5		4.6 / -24.4							
		2.0H	5.7 / -17.5		6.6 / -25.0							