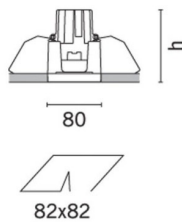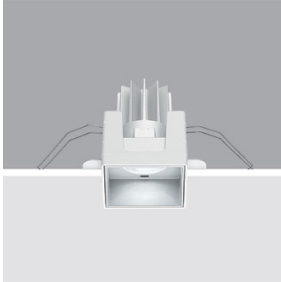# Deep Laser

Design iGuzzini	iGuzzini

Last information update: September 2023

Product configuration: M997
M997: medium body, Minimal installation 6 LED warm white

Product code
M997: medium body, Minimal installation 6 LED warm white **Attention! Code no longer in production**

Technical description
Fixed square recessed luminaire designed to use a 6X2W LED lamp in warm white (3100°K) with medium optic. Flush-mounting recessed item without rim consists of a die-cast aluminium frame for fixing the recessed luminaire to false ceilings made of plasterboard 12.5 mm thick. The upper part is a heat sink which helps to carry away the heat given off by the lamp. LED optics with a single lens made of thermoplastic material. Lamp set back 40 mm for greater visual comfort

Installation
Installation flush with the ceiling is for false ceilings 12.5 mm thick

Colour
White (01) | Grey (15)

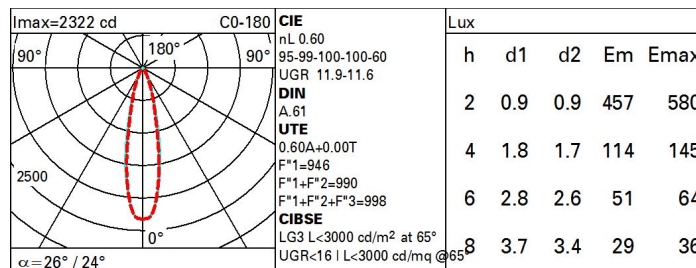### Mounting
wall recessed|ceiling recessed

Wiring
product complete with electronic components
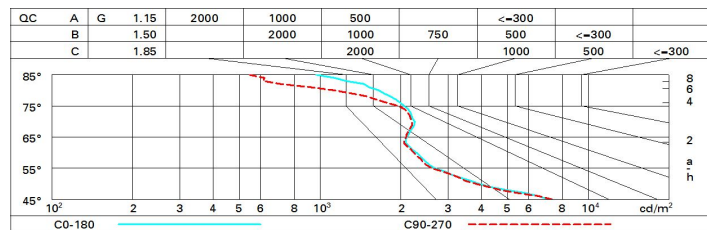
Complies with EN60598-1 and pertinent regulations

IP23 · CE · pending · pending

Technical data

lm system:	600	CRI (minimum):	80
W system:	10	Colour temperature [K]:	3000
lm source:	1000	Life Time LED 1:	> 50,000h - L80 - B10 (Ta 25°C)
W source:	8.7	Ballast losses [W]:	1.3
Luminous efficiency (lm/W, real value):	60	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]:	0	ZVEI Code:	LED
Light Output Ratio (L.O.R.) [%]:	60	Number of optical assemblies:	1
Beam angle [°]:	26° / 24°		

Polar

Imax=2322 cd   C0-180

90° · 180° · 90° · 2500 · 0°

α=26° / 24°

CIE
nL 0.60
95-99-100-100-60
UGR 11.9-11.6
DIN
A.61
UTE
0.60A+0.00T
F"1=946
F"1+F"2=990
F"1+F"2+F"3=998
CIBSE
LG3 L<3000 cd/m² at 65°
UGR<16 | L<3000 cd/mq @65°

Lux				
h	d1	d2	Em	Emax
2	0.9	0.9	457	580
4	1.8	1.7	114	145
6	2.8	2.6	51	64
8	3.7	3.4	29	36

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	53	50	47	46	49	47	47	45	74
1.0	55	53	50	49	52	50	50	48	79
1.5	59	56	55	53	56	54	54	52	86
2.0	61	59	58	57	58	57	56	55	91
2.5	62	61	60	59	60	59	58	56	94
3.0	63	62	61	60	61	60	59	58	96
4.0	63	63	62	62	62	61	60	59	98
5.0	64	63	63	63	62	62	61	59	99

Luminance curve limit

QC	A	G	1.15	2000		1000		500		<=300			
	B		1.50			2000		1000	750		500	<=300	
	C		1.85					2000			1000		500	<=300

C0-180 ———   C90-270 - - - - - - - -

UGR diagram

Corrected UGR values (at 1000 lm bare lamp luminous flux)										

Riflect.:										
ceil/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			viewed					viewed			
x	y		crosswise					endwise			
2H	2H	11.7	13.5	12.0	13.8	14.1	11.6	13.4	11.9	13.7	14.1
	3H	11.9	13.3	12.3	13.6	14.0	11.5	13.0	11.9	13.3	13.6
	4H	12.0	13.3	12.4	13.6	13.9	11.5	12.7	11.9	13.1	13.4
	6H	12.1	13.2	12.5	13.5	13.9	11.4	12.5	11.8	12.8	13.2
	8H	12.1	13.2	12.5	13.5	13.9	11.4	12.5	11.8	12.8	13.2
	12H	12.1	13.1	12.5	13.5	13.9	11.4	12.4	11.8	12.8	13.1
4H	2H	11.6	12.8	12.0	13.1	13.5	11.9	13.1	12.3	13.5	13.8
	3H	11.9	12.9	12.3	13.3	13.6	12.0	13.0	12.4	13.4	13.7
	4H	12.0	13.0	12.5	13.4	13.8	11.9	12.9	12.3	13.3	13.7
	6H	12.0	13.5	12.4	13.9	14.4	11.7	13.2	12.1	13.6	14.1
	8H	11.9	13.6	12.4	14.1	14.5	11.6	13.2	12.0	13.7	14.2
	12H	11.9	13.6	12.4	14.1	14.6	11.5	13.2	12.0	13.7	14.2
8H	4H	11.7	13.4	12.2	13.8	14.3	11.7	13.3	12.2	13.8	14.3
	6H	11.8	13.4	12.3	13.9	14.4	11.6	13.2	12.1	13.7	14.2
	8H	11.9	13.3	12.4	13.8	14.4	11.6	13.0	12.1	13.5	14.1
	12H	12.1	13.0	12.6	13.5	14.1	11.7	12.7	12.3	13.2	13.8
12H	4H	11.6	13.3	12.1	13.8	14.3	11.6	13.3	12.1	13.8	14.3
	6H	11.8	13.2	12.3	13.7	14.3	11.6	13.0	12.1	13.5	14.1
	8H	12.0	13.0	12.5	13.5	14.0	11.7	12.7	12.3	13.2	13.8

Variations with the observer position at spacing:				
S =	1.0H	2.0 / -2.6		2.2 / -2.9
	1.5H	4.1 / -3.4		4.3 / -3.8
	2.0H	5.9 / -3.5		6.1 / -4.0