# Laser Blade

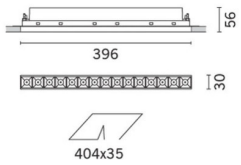
**Design iGuzzini** **iGuzzini**

Last information update: May 2018

**15 - cell Frameless Recessed luminaire - LED - Warm white - Incorporated DALI dimmable power supply - Flood optic**

**Product code**
MQ93

**Technical description**
rectangular miniaturised recessed luminaire with 15 optical elements with LED lamps - fixed optics - flood beam angle. Main body with die-cast aluminium radiant surface; minimal (frameless) version for mounting flush with the ceiling. Metallised thermoplastic high definition optics, integrated in a rear position in the black anti-glare screen; the structure of the optical system prevents a pinpoint effect, allowing precise, circular light distribution and emission with controlled glare . Supplied with DALI dimmable electronic control gear connected to the luminaire. Warm white high colour rendering LED




**Installation**
recessed with steel wire springs on the specific adapter (included) which allows flush-mounting with the ceiling. Adapter fixed to false ceiling (12.5 mm thick) with self-tapping screws; subsequent filling and smoothing operations; insertion of luminaire body and aesthetic finishing. Preparation hole 35 x 403

**Dimension (mm)**
396x30x56

**Colour**
White (01) | Black (04)

**Weight (Kg)**
1.1

**Mounting**
wall recessed|ceiling recessed

**Wiring**
on control gear box with quick-coupling connections

Complies with EN60598-1 and pertinent regulations

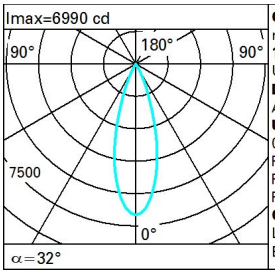
IP20 IP23 On the visible part of the product once installed

**Product configuration: MQ93**

**Product characteristics**
Total lighting output [Lm]: 2036.7
Total power [W]: 35
Luminous efficacy [Lm/W]: 58.2
Life Time: 50,000h - L90 - B10 (Ta 25°C)
Total luminous flux at or above an angle of 90° [Lm]: 0
Emergency luminous flux [Lm]: /
Voltage [V]: -
Number of optical assemblies: 1

**Optical assembly Characteristics Type 1**
Light Output Ratio (L.O.R.) [%]: 80
Lamp code: LED
ZVEI Code: LED
Nominal power [W]: 31
Nominal luminous [Lm]: 2550
Lamp maximum intensity [cd]: /
Beam angle [°]: 32°
Number of lamps for optical assembly: 1
Socket: /
Ballast losses [W]: 4
Colour temperature [K]: 3000
CRI: 95
Wavelength [Nm]: /
MacAdam Step: 3

**Polar**




**CIE**
nL 0.80
100-100-100-100-80
UGR <10-<10
**DIN**
A.61
**UTE**
0.80A+0.00T
F"1=1000
F"1+F"2=1000
F"1+F"2+F"3=1000
**CIBSE**
LG3 L<200 cd/m² at 65°
BZ1

Lux

| h | d | Em | Emax |
|---|---|---|---|
| 2 | 1.1 | 1344 | 1747 |
| 4 | 2.3 | 336 | 437 |
| 6 | 3.4 | 149 | 194 |
| 8 | 4.6 | 84 | 109 |

**Utilisation factors**

| R | 77 | 75 | 73 | 71 | 55 | 53 | 33 | 00 | DRR |
|---|---|---|---|---|---|---|---|---|---|
| K0.8 | 72 | 69 | 66 | 64 | 68 | 66 | 65 | 63 | 78 |
| 1.0 | 75 | 72 | 70 | 68 | 71 | 69 | 69 | 66 | 83 |
| 1.5 | 79 | 77 | 75 | 73 | 76 | 74 | 73 | 71 | 89 |
| 2.0 | 81 | 80 | 78 | 77 | 79 | 77 | 76 | 74 | 93 |
| 2.5 | 83 | 82 | 81 | 80 | 80 | 79 | 79 | 77 | 96 |
| 3.0 | 84 | 83 | 82 | 81 | 82 | 81 | 80 | 78 | 98 |
| 4.0 | 85 | 84 | 84 | 83 | 83 | 82 | 81 | 79 | 99 |
| 5.0 | 85 | 85 | 85 | 84 | 84 | 83 | 82 | 80 | 100 |

**UGR diagram**

Corrected UGR values (at 2550 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 | -3.7 | -3.2 | -3.4 | -3.0 | -2.7 | -3.7 | -3.2 | -3.4 | -3.0 | -2.7 |
| | 3H | -3.8 | -3.4 | -3.5 | -3.1 | -2.8 | -3.8 | -3.4 | -3.5 | -3.1 | -2.8 |
| | 4H | -3.9 | -3.5 | -3.6 | -3.2 | -2.9 | -3.9 | -3.5 | -3.6 | -3.2 | -2.9 |
| | 6H | -4.0 | -3.6 | -3.6 | -3.3 | -3.0 | -4.0 | -3.6 | -3.6 | -3.3 | -3.0 |
| | 8H | -4.0 | -3.6 | -3.7 | -3.3 | -3.0 | -4.0 | -3.6 | -3.7 | -3.3 | -3.0 |
| | 12H | -4.1 | -3.7 | -3.7 | -3.4 | -3.0 | -4.1 | -3.7 | -3.7 | -3.4 | -3.0 |
| 4H | 2H | -3.9 | -3.5 | -3.6 | -3.2 | -2.9 | -3.9 | -3.5 | -3.6 | -3.2 | -2.9 |
| | 3H | -4.1 | -3.7 | -3.7 | -3.4 | -3.0 | -4.1 | -3.7 | -3.7 | -3.4 | -3.0 |
| | 4H | -4.2 | -3.8 | -3.8 | -3.5 | -3.1 | -4.2 | -3.8 | -3.8 | -3.5 | -3.1 |
| | 6H | -4.2 | -4.0 | -3.8 | -3.6 | -3.1 | -4.2 | -4.0 | -3.8 | -3.6 | -3.1 |
| | 8H | -4.3 | -4.0 | -3.9 | -3.6 | -3.2 | -4.3 | -4.0 | -3.9 | -3.6 | -3.2 |
| | 12H | -4.3 | -4.1 | -3.9 | -3.7 | -3.2 | -4.3 | -4.1 | -3.9 | -3.7 | -3.2 |
| 8H | 4H | -4.3 | -4.0 | -3.9 | -3.6 | -3.2 | -4.3 | -4.0 | -3.9 | -3.6 | -3.2 |
| | 6H | -4.4 | -4.2 | -3.9 | -3.7 | -3.2 | -4.4 | -4.2 | -3.9 | -3.7 | -3.2 |
| | 8H | -4.4 | -4.3 | -4.0 | -3.8 | -3.3 | -4.4 | -4.3 | -4.0 | -3.8 | -3.3 |
| | 12H | -4.5 | -4.3 | -4.0 | -3.8 | -3.3 | -4.5 | -4.3 | -4.0 | -3.8 | -3.3 |
| 12H | 4H | -4.3 | -4.1 | -3.9 | -3.7 | -3.2 | -4.3 | -4.1 | -3.9 | -3.7 | -3.2 |
| | 6H | -4.4 | -4.3 | -4.0 | -3.8 | -3.3 | -4.4 | -4.3 | -4.0 | -3.8 | -3.3 |
| | 8H | -4.5 | -4.3 | -4.0 | -3.8 | -3.3 | -4.5 | -4.3 | -4.0 | -3.8 | -3.3 |

Variations with the observer position at spacing:

| | | | |
|---|---|---|---|
| S = | 1.0H | 6.8 / -18.5 | 6.8 / -18.5 |
| | 1.5H | 9.6 / -18.7 | 9.6 / -18.7 |
| | 2.0H | 11.6 / -23.0 | 11.6 / -23.0 |