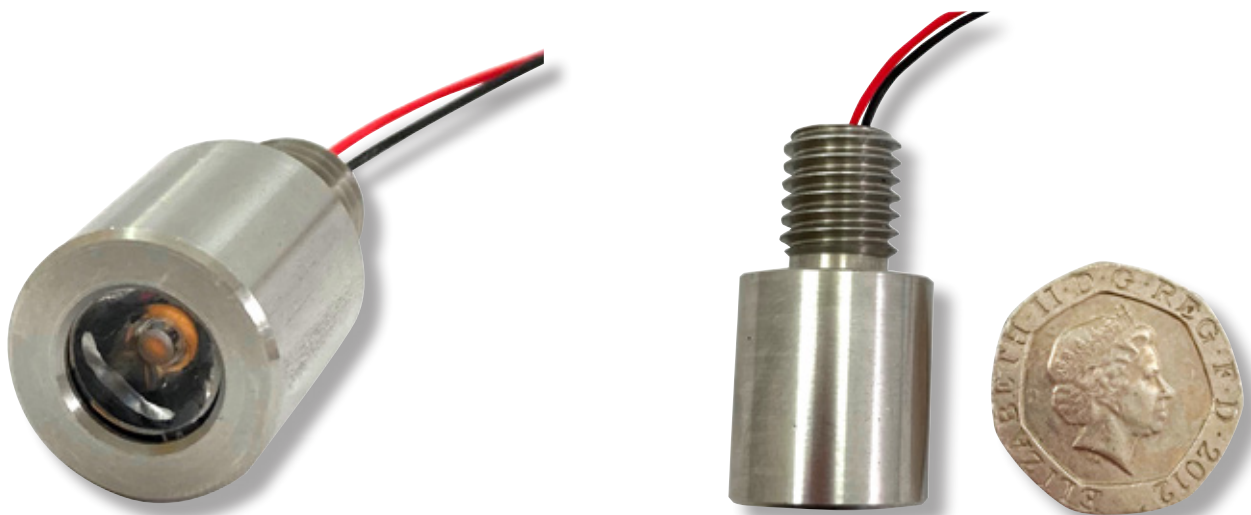




ILS Micro Eye Modules - IR

ILU-IW01-xxSL-SC211-W2-xLENS.

The Micro Eye is the latest compact high flux LED spotlight from Intelligent LED Solutions. At the heart of each Micro Eye is an OSLO Black IR LED. Integrated heatsinking keeps the Micro Eye cool as well as compact. Micro Eyes are available in 3 lensed versions: spot lens, medium lens and wide lens. The spot lens delivers a 16 degree beam, the medium lens delivers a 41 degree beam and the wide lens delivers a 90 degree. Connecting wires are attached as standard and have a threaded end for ease of installation.



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APPLICATIONS

- » Surveillance systems
- » IR illumination for cameras
- » Machine Vision
- » Night vision
- » Driver assistance systems

TECHNICAL FEATURES

LED Family	OSLON® Black IR
Lifetime	Up to 100,000 hour lifetime to 70% of original brightness
Mounting	Mounting holes using M3 screws allow easy installation
Dimensions	(L x W) 35 x 16mm
Wiring	Available with 200mm connecting wires
Secondary Optics	Micro Eyes are supplied with an integrated optic
Heatsinks	The housing of the Micro Eye acts as the heatsink therefore no additional heatsinking is needed
Power Supply	4 - 75W dimming and non-dimming. Suitable options on page 8 or visit our website for a full range
Chain	Micro Eyes can be linked together to produce longer chains
Current Range	100 to 500mA
Thermal Resistance	3.7K/W
Current vs Case Temperature @ 350mA	33°C
Current vs Case Temperature @ 500mA	86°C

PRODUCT OPTIONS - SPOT LENS

ILS Part Number	IR centroid wavelength	Forward Voltage †	Radiant intensity IF = 0.5 A , tp = 10 ms§	Radiance Angle	Relevant OSRAM LED Data
ILU-IW01-85SL-SC221-W2+SLENS.	850nm	2.7-3.5V	635mW	16° (±8°)	SFH4716AS
ILU-IW01-94SL-SC221-W2+SLENS.	940nm	2.7-3.5V	495mW	16° (±8°)	SFH4726AS

Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

§ Tolerance +/- 10%

† Measured with 10mS 350mA pulse at 85 °C

PRODUCT OPTIONS - MEDIUM LENS

ILS Part Number	IR centroid wavelength	Forward Voltage †	Radiant intensity IF = 0.5 A , tp = 10 ms§	Radiance Angle	Relevant OSRAM LED Data
ILU-IW01-85SL-SC221-W2+MLENS.	850nm	2.7-3.5V	635mW	41° (±20.5°)	SFH4716AS
ILU-IW01-94SL-SC221-W2+MLENS.	940nm	2.7-3.5V	495mW	41° (±20.5°)	SFH4726AS

Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

§ Tolerance +/- 10%

† Measured with 10mS 350mA pulse at 85 °C

PRODUCT OPTIONS - WIDE LENS

ILS Part Number	IR centroid wavelength	Forward Voltage †	Radiant intensity IF = 0.5 A , tp = 10 ms§	Radiance Angle	Relevant OSRAM LED Data
ILU-IW01-85SL-SC221-W2+WLENS.	850nm	2.7-3.5V	635mW	90° (±45°)	SFH4716AS
ILU-IW01-94SL-SC221-W2+WLENS.	940nm	2.7-3.5V	495mW	90° (±45°)	SFH4726AS

Due to the special conditions of the manufacturing processes of LEDs, the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

§ Tolerance +/- 10%

† Measured with 10mS 350mA pulse at 85 °C

MINIMUM AND MAXIMUM RATINGS

ILS Part Number	Operating Temperature at Tc-Point [° C]	Storage Temperature [° C]	Forward Current per Chip [mA]	Reverse Voltage [Vdc]
ILU-IW01-xxxx-SC221-W2.xLENS.	-40 °C ~ 100 °C	-40 °C ~ 100 °C	100-500mA	Not designed for reverse operation

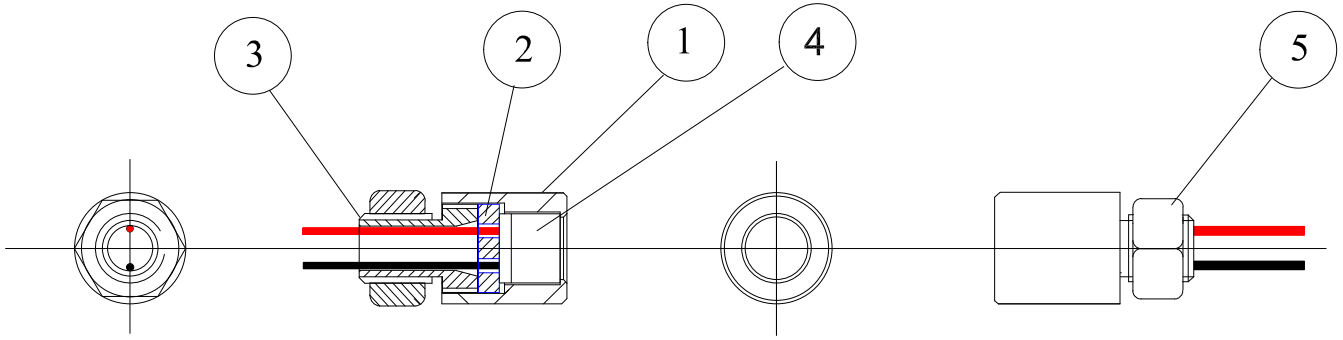
Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED module.

Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED module.

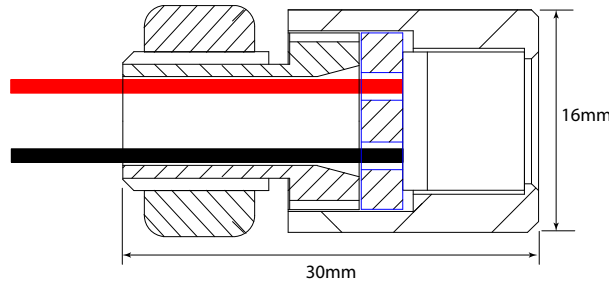
The temperature of the LED module must be measured at the Tc-Point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

TECHNICAL DRAWINGS

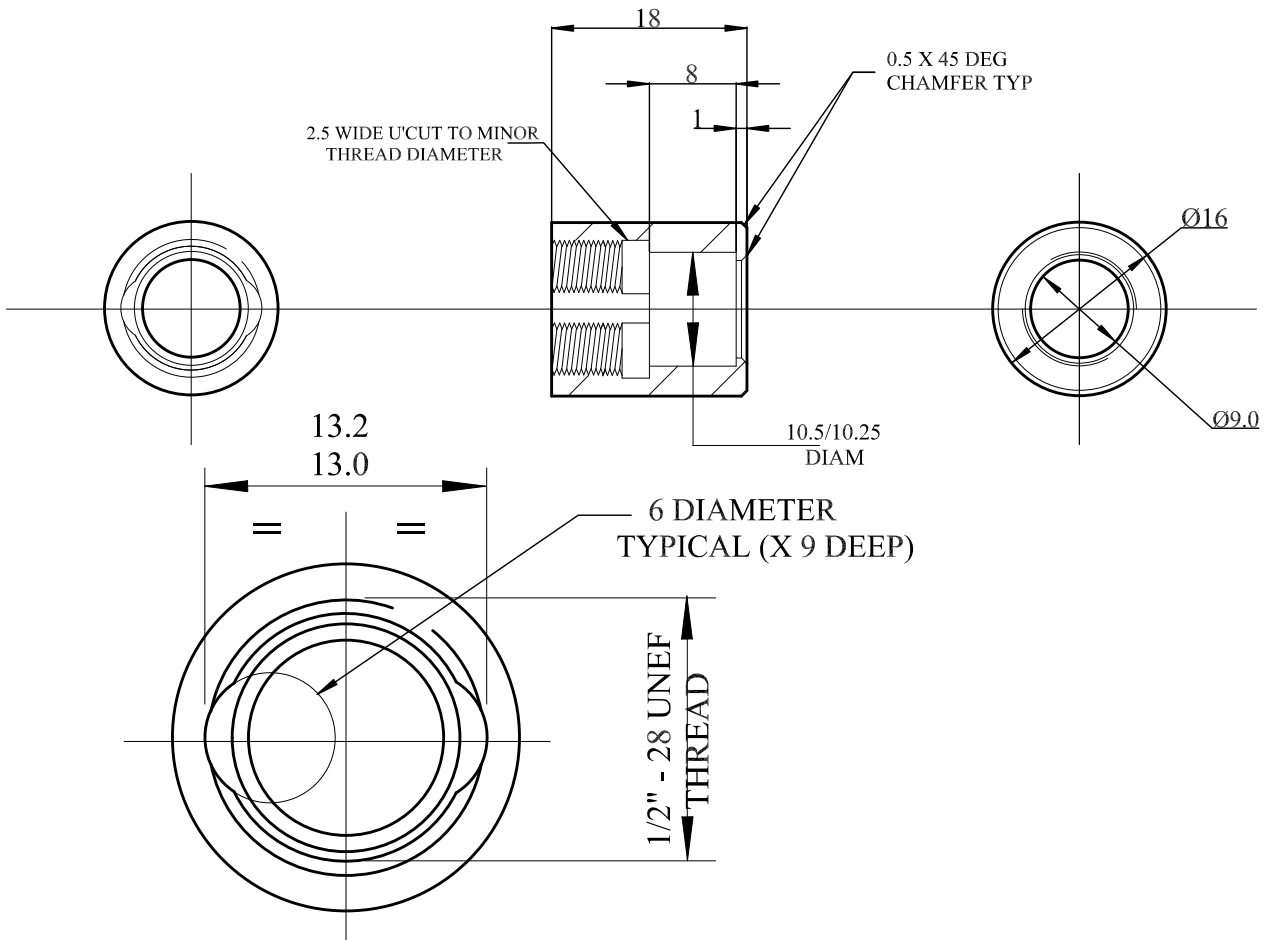
PRODUCT DATASHEET » ILU-IW01-xxSL-SC211-W2-XLENS.



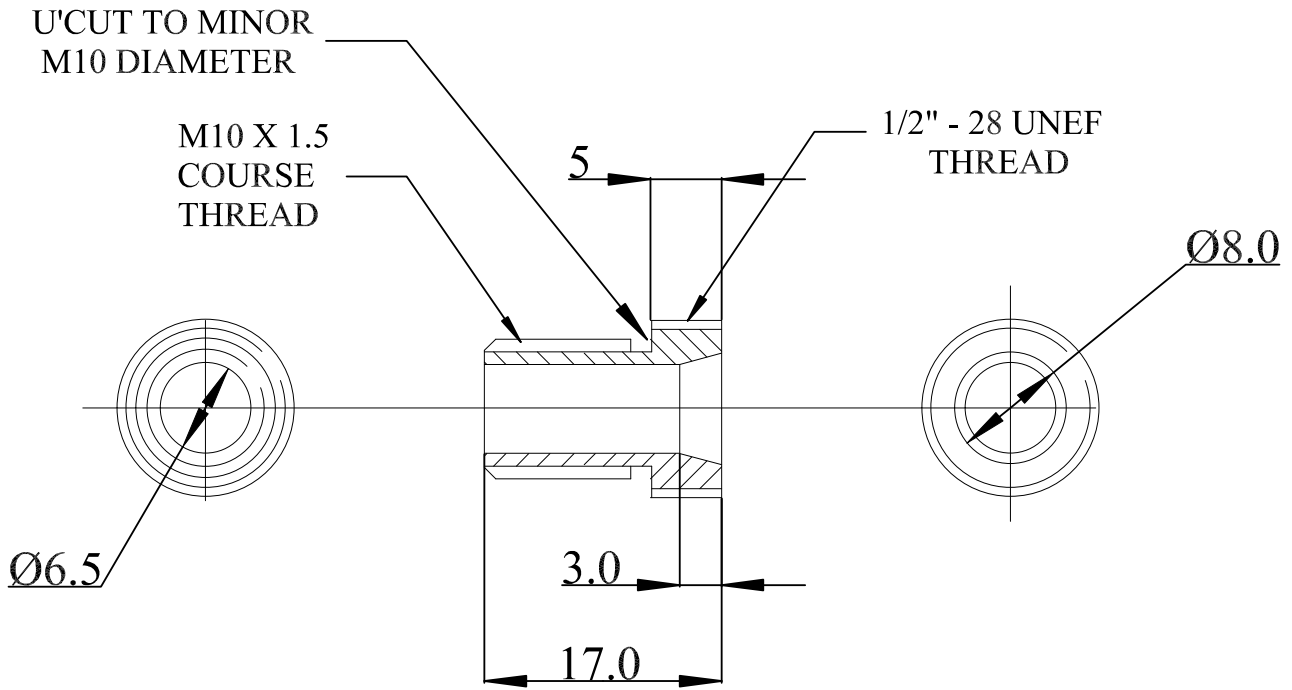
ITEM	DESCRIPTION
1	OUTER HOUSING
2	SPACER
3	WIRE OUTLET
4	OSLO LED
5	M10 X 1.5 NUT
6	LOCTITE BLUE



OUTER HOUSING (Item 1) & OSLO LED (Item 4)



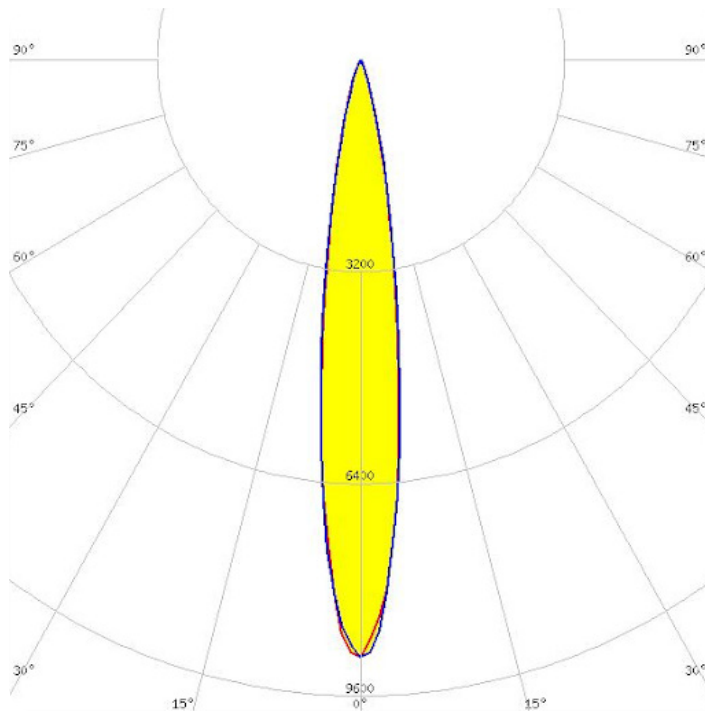
WIRE OUTLET (Item 3)



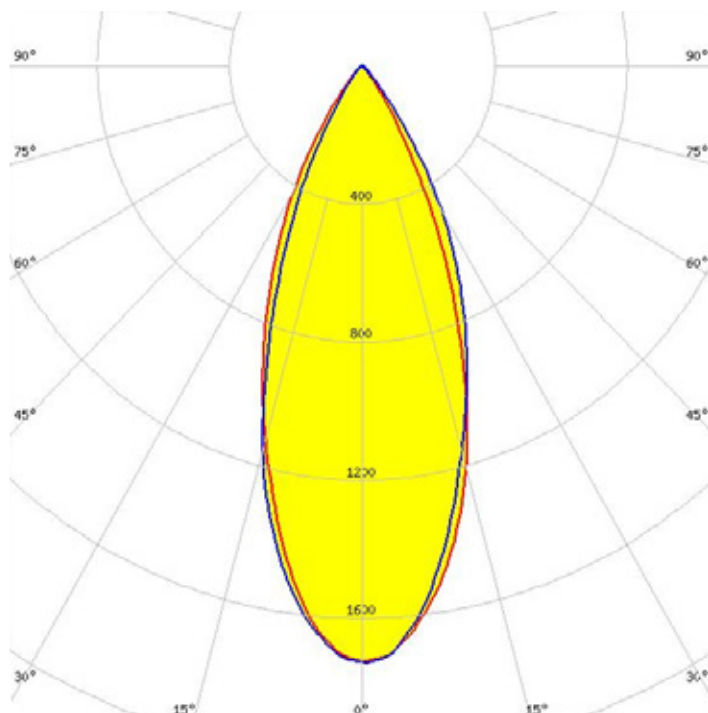
3D drawing files are available on request from ILS. Please call or email.

RADIATION OF SINGLE LED

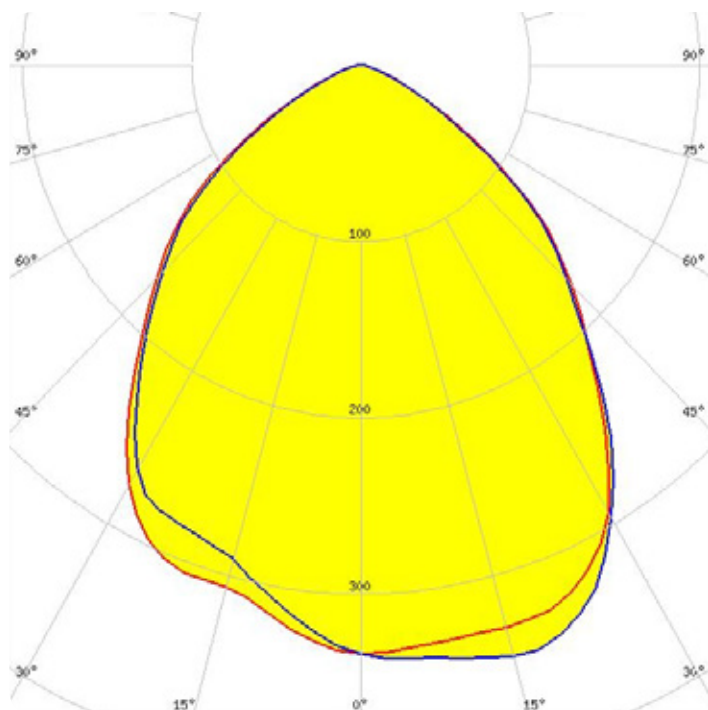
Spot Lens















Medium Lens



Wide Lens



POWER SUPPLY OPTIONS

	I/S Driver Part Number	Rating	Current	Micro Eyes Per LED Driver	Dimming
	IZC035-004F-4065C-SAL	4W	350mA	2-4	No
	IZC035-008F-5065C-SA	8W	350mA	2-12	No
	OTi-DALI-10/220-240/700-NFC-I	10W	150-700mA	1-16	DALI
	OTE-13/220-240/350-PC	13W	350mA	7-13	Phase Cut Dimming
	OTi-DALI-15/220...240/1A0-NFC	15W	150-1050mA	3-19	DALI
	IZC035-018T-9500A-SX	18W	350mA	6-12	Main Dimming
	ILA-1 CH-LED-TESTER-USB-01	1.75W	50-350mA	1	No
	ILA-1 CH-LED-TESTER-PREC-01	16.8W	10-700mA	1-6	Constant Current Dimming
	IT-FIT-4/220-240/400-CS-I	4W	100-400mA	1-3	No
	IT-FIT-7/220-240/700-CS-I	7W	350-700mA	1-3	No
	IT-FIT-11/220-240/500-CS-I	11W	350-500mA	4-7	No
	IT-FIT-15/220-240/700-CS-I	11W	550-700mA	4-7	No

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IMPORTANT INFORMATION AND PRECAUTIONS



The Micro Eye's LED, when powered up, is very bright. Thus it is advised that you do not look directly at it. Turn the Micro Eye away from you and do not shine into the eyes of others.



Micro Eyes, when operated, can reach high temperatures thus there is risk of injury if they are touched.



Micro Eyes will overheat in operation if not attached to a suitable heatsink. Overheating can cause failure or irreparable damage.



DO NOT HOT PLUG ON LED SIDE OF POWER SUPPLY.



Do not operate Micro Eyes with a power supply with unlimited current. Connection to constant voltage power supplies that are not current limited may cause the Micro Eye to consume current above the specified maximum and cause failure or irreparable damage.



DO NOT TOUCH or PUSH on the LED as this can cause irreparable damage.

SAFETY INFORMATION



The Micro Eye itself and all its components must not be mechanically stressed.



Assembly must not damage or destroy conducting paths on the circuit board.



The mounting of the module is carried out by attaching it at the mounting holes. Metal mounting screws must be insulated with synthetic washers to prevent circuit board damage and possible short circuiting.



To avoid mechanical damage to the connecting cables, the boards should be attached securely to the intended substrate. Heavy vibration should be avoided.



Observe correct polarity! Depending on the product, incorrect polarity will lead to emission of red or no light. The module can be destroyed!



Pay attention to standard ESD precautions when installing the Micro Eyes.



The Micro Eyes, as manufactured, have no conformal coating and therefore offer no inherent protection against corrosion. Damage by corrosion will not be accepted as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.



For outdoor usage, a housing is definitely required to protect the board against environmental influences. The design of the housing must correspond to the IP standards in the application. It is also the responsibility of the user to ensure any housings or modifications keep the Tc junction temperature to within stated ranges.



To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards: CE: EC 61374-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61374-2-13 and IEC/EN 62384.



The evaluation of eye safety occurs according to the standard IEC 62471:2006 ("photobiological safety of lamps and lamp systems"). Within the risk grouping system of this CIE standard, the LED specified in this datasheet falls into the class "moderate risk" (exposure time 0.25s). Under real circumstances (for exposure time, eye pupils, observation distance), it is assumed that no endangerment to the eye exists from these devices. As a matter of principle, however, it should be mentioned that intense light sources have a high secondary exposure potential due to their blinding effect. As is also true when viewing other bright light sources (e.g. headlights), temporary reduction in visual acuity and afterimages can occur, leading to irritation, annoyance, visual impairment and even accidents, depending on the situation.

FURTHER INFORMATION

The values contained in this datasheet can change due to technical innovation. Any such changes will be made without separate notification.

If you require further assistance or have a specific or custom enquiry, please contact the ILS team via email or phone. Alternatively please visit our website for more product info and to see our full ranges.



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ABOUT ILS

ILS offers a high level of technical skill, professionalism and commercial understanding to companies requiring market-leading optoelectronics solutions. Offering conceptual advice, electronics design and manufacturing capability, we use high quality production resources both in-house and in Asia, providing project support from prototyping to mass production. We also understand the need to provide cost-effective solutions and we do so using high quality components to ensure that the end product's reliability and quality is uncompromised. Apart from LEDs in the visible spectrum, we have a wide range of **Infrared**, **UV LEDs**, **UV tubes**, and lasers.

ILS is a division of **Intelligent Group Solutions Ltd (IGS)** a well-established respected industry leading Optoelectronics solutions provider. Much of IGS' business comes from providing semi-custom or custom products both in component and sub-assembly form, and from providing design support and prototyping within the European market place. We can deliver production displays to wherever in the world that the customer's manufacturing or assembly is being undertaken.

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