SmartView

FLAT DOME
LIGHT

FLNO-480-S

Designed for incident, homogenous illumination including surface inspection, homogenous PCB boards, incident illumination of glossy objects & surfaces and large area lighting.

- ROUGH, METAL HOUSING
- ANALOG ILLUMINATION INTENSITY CONTROL
- DIGITALLY CONTROLLED TIMING OF STROBE PULSES

LIGHT OPERATING MODES

PERMANENT ILLUMINATION MODE

This light is designed for both the permanent and light-triggering mode. For permanent illumination bring the voltage of 10-24 V to the pin number 4 (black wire). The light is ON during the time when the 24 V EN signal is activated. Use a PCL, camera or another binary signal source. For the light intensity control, please see the text bellow.

LIGHT TRIGGERING MODE

Light triggering mode saves energy and extends the lifetime of the light. Trigger operation mode is recommended when a parallel operation of 2 or more lights might affect the quality of the acquired image. To start using a triggering mode, bring the pin number 4 (black wire) to a 10-24 V signal. The light is ON when a voltage of 24 V is present at pin number 4 then. Use a PCL, camera, or another binary signal source for triggering. For the light intensity control, please see the text bellow.

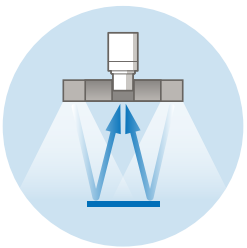
STROBE MODE

Strobe function significantly multiplies the maximum intensity of the light. The strobing function saves energy, extends the light lifetime and in many cases improves the stability of the entire inspections system. Pin number 2 (white wire) of the M8 connector is used to activate the strobe function. The maximum strobe pulse time is 10 ms, while the light idle time must be at least 10 times longer, which in this case makes 100 ms. Bringing a permanent logical 1 signal (10-24 V voltage) to a light strobe input, the light standardly operates in a 10 ms ON and 100 ms OFF cycle. The strobe operation pulse might be chosen in the time span of 1-10 ms. Please do not use a trigger mode during strobing function, do not bring a voltage to the pin number 3.

LIGHT SOURCE INTENZITY REGULATION

The light intensity might be regulated by an analogue voltage, PWM signal or an external controller. In case of using an analogue signal, the light intensity might be regulated in a linear way at a pin number 4 by the voltage span of 2.7 -10 V. Bringing a voltage of 10-24 V to the pin number 4, the light works at its maximum intensity. The maximum PWM frequency is ≤ 40 kHz.

WAYS OF USE



ORDERING CODE

example of the ordering code

FLNO	-	480	B	-	S
Flat Light No Opening		Active Area	Wavelength		Slim Version

CONFIGURATION

Model	Wavelength [nm]	Active Area [mm]
FLNO-480W-S	CTR 5000 k	480 x 480
FLNO-480IR-S	850	480 x 480
FLNO-480R-S	625	480 x 480
FLNO-480G-S	528	480 x 480
FLNO-480B-S	470	480 x 480

ELECTRIC PARAMETERS

Model	FLNO-480W	FLNO-480IR	FLNO-480R	FLNO-480G	FLNO-480B
U_n Voltage Span	18-28 V	18-28 V	18-28 V	18-28 V	18-28 V
U_{jm} Nominal Voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
I_{jm} Nominal Current	3.5 A	3.5 A	3.5 A	3.5 A	3.5 A
P Input	84 W	84 W	84 W	84 W	84 W

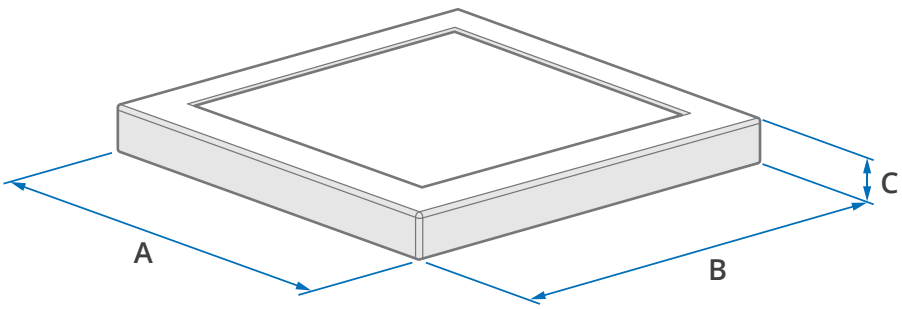
U_{trig}	Trigger Voltage	≥ 10 - 24 V	2	I_{trig}	Trigger Current	2.3 mA	2	U_{EN} Analogue Dimming	≥ 2.7 .. ≤ 10 V	2
U_{str}	Strobe Voltage	3 - 24 V	3	I_{str}	Strobe Current	1.9 mA	3	I_{EN} PWM Dimming	> 10 .. ≤ 24 V	1

1 *PWM maximal rate is ≤ 40 kHz* 2 *EN (Enable) trigger signal values, M8 connector – pin number 4* 3 *Driving voltage and current M8 connector - pin number 2*

DIMENSIONS & WEIGHT

A	Length [mm]	520
B	Width [mm]	520
C	Height [mm]	34
	Weight [g]	7 700

For more details please see **our 2D drawings**.

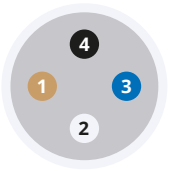


TECHNICAL DATA

IP Category: **IP64** | Protection Category: **III** | Ambient Temperature: **-20 - +40 °C** | Isolation Resistance: **500 V** | Housing Material: **Aluminium alloy**

CONNECTOR M12-4PIN ASSIGNMENT

light connector front view



1	Brown	+	+24 V
2	White		EN
3	Blue	−	0 V
4	Black		EN

••• 2 **ENABLE - strobe mode (+24 V)**

••• 4 **ENABLE**

- A permanent lighting or trigger signal (10-24 V)
- B light intensity regulation: analogue signal 2.7-10 V or PWM ≤ 40 kHz

ACCESSORIES

✓ Angular Cable M12-4PIN **(5 m)**

OPTIONAL ACCESSORIES

+ Straight Cable M12-4PIN **(5 m)**
+ Light Polarization
+ Controller **Smart Light CT-SL4D**
+ Controller **CM-01**

SmartView

YOUR VISION PARTNER

COMPANY OFFICE

Smart View s.r.o.
Nivy 313
765 02 Otrokovice
Česká republika

+420 601 575 797
+420 602 457 497

info@smartview.cz
www.smartview.cz

OUR SALES PARTNERS SLOVAKIA

MTS, spol. s r.o.
Krivá 53
027 55 Krivá
Slovensko

+421 43 5819 111

mts@mts.sk
www.mts.sk