



LMDX103 & LMDX203

OPERATING INSTRUCTIONS

wenglor TPL

INTRODUCTION

This User Guide contains warnings and guidance for correct and safe operation of the product. These instructions must be followed at all times. wenglorTPL will not be held responsible for problems caused by using the product contrary to these instructions and the Warranty will be deemed invalid.



UNPACKING

This product is packed at the factory using suitable materials for safe transport. To open the package, do not use any cutting blade to avoid damaging the product(s). Please use the delivered accessories if needed. (Do not use any other products or equivalents to replace the delivered accessories).

In the event of damage occurring during shipping, it must be reported to the carrier at time of delivery (including noting the damage in writing on the delivery documents). It is also your responsibility to notify wenglorTPL in writing of the damage within 24 hours of receipt of the package. If these instructions are not followed, wenglorTPL reserves the right not to accept requests for return and exchange of damaged products.

RISK CLASS

The applicable Standard EN-62471 classifies LED Lighting into 4 groups (or classes) according to their degree of hazard severity. The table below summarises the risks associated with our various standard products.

wenglorTPL can provide **guidance notes to minimise photo-biological risks**, including the nominal minimum operating distance. Please contact wenglorTPL through your usual representative for this information.

wenglorTPL recommends the use of the protection glasses.

Colour	Class	Risk
White WHI	0	none
UV	3	high





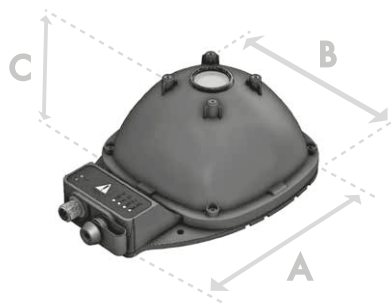
LMDX103 & LMDX203

OPERATING INSTRUCTIONS

P2/8

DIMENSIONS

DOME	Length (mm)	Width (mm)	Height (mm)
	A	B	C
LMDX103	193	136	75
LMDX203	257	197	106.75



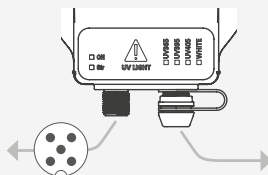
FIXING

During the set up, the light has to be switched off and unplugged. Please use the fixing holes designed for that purpose. We recommend the using of M5 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker (not supplied) to avoid any risk of loosening.

CONTROL OF PRODUCT

M12 5P Connector

- Power supply
- WHI to UV switch
- Strobe UV/WHI
- Dimming



Removable Cap to access button. Use button to cycle through UV wavelengths:

- 1 365 + 395 + 405
- 2 395 + 405
- 3 365

LED INDICATORS

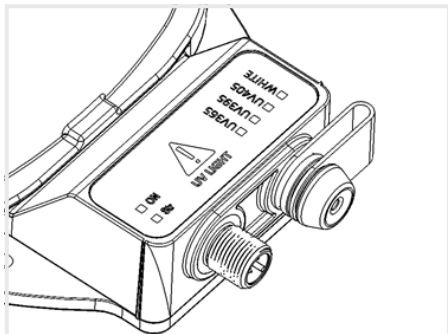
LEFT HAND SIDE INDICATORS show the status of the light. **ON** means power is supplied. **Str** will be illuminated **synchronously** with the UV LEDs turning on.



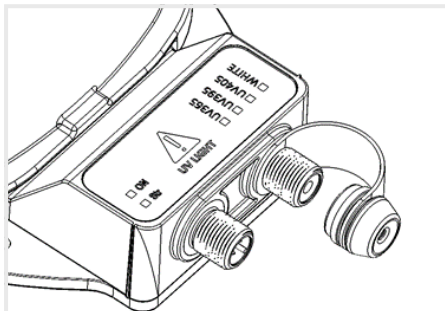
RIGHT HAND SIDE INDICATORS will show the UV wavelengths that have been selected based on button input. **White** indicator will turn on **synchronously** with the white LEDs turning on.



■ HOW TO ACCESS THE BUTTON

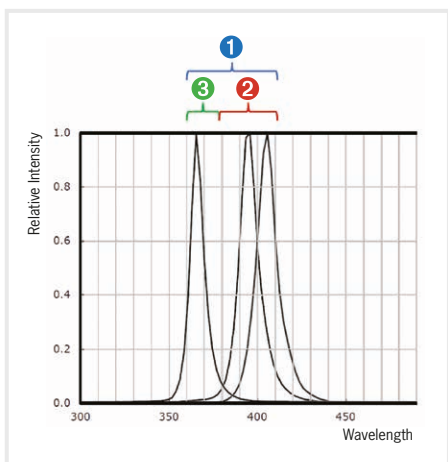


When product is in use, always ensure the cap is compressing the rubber retainer.
This will maintain **IP65 compliance**.



Remove cap to access Ø3.4mm channel that can be accessed via small screwdriver or Allen Key to **adjust UV wavelength** via internal button.

■ UV WAVELENGTH DESCRIPTION



■ BINNING INFORMATION

wenglorTPL is extremely careful about BIN sorting in the selection of LEDs for their products.

The human eye is very sensitive to colour variations. It may appear to the customer that 2 colours do not appear the same.

Despite any noticeable differences, the peak wavelength variation does not exceed 10nm.



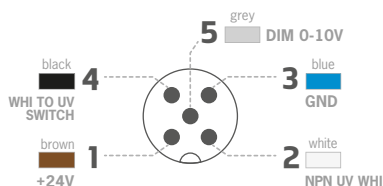
LMDX103 & LMDX203

OPERATING INSTRUCTIONS

P4/8

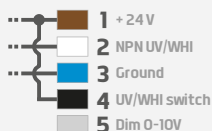
CONNECTION

M12 Connector 5 male pins

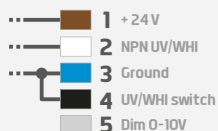


The **M12 male connector 5 points** is **COMPLIANT** with the M12 female connector 4 points. In that case, the dimming option is not available.

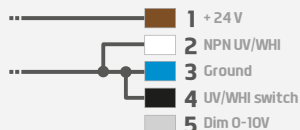
STROBE UV:



STROBE WHI:



CONTINUOUS MODE (WHI ONLY):



CONTINUOUS MODE IS WHITE (WHI) ONLY.

DO NOT CONNECT NPN UV LINE DIRECTLY TO GND IF PIN 4 IS AT 24VDC.

STROBE MODE

STROBE TRIGGERING MODE - NPN (both types)

NPN → From 0 to 2V ON. From 5V to 24V OFF.

WHI to UV switch → From 0 to 2V white. From 5V to 24V UV.

STROBE TIMING LIMITS IN OVERDRIVE VERSION

D max	t min	t max	max frequency
10 %	30 μ s	10 ms	310 Hz

- D : duty cycle
- t : pulse duration
- CW : continuous working

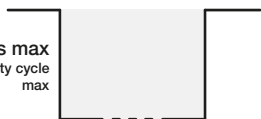
**DON'T EXCEED 310 Hz
when strobing NPN**





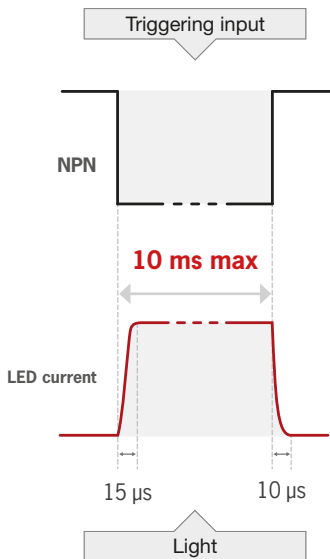
STROBING THE LIGHT VIA NPN BEHAVIOUR

10 ms max
10% duty cycle max



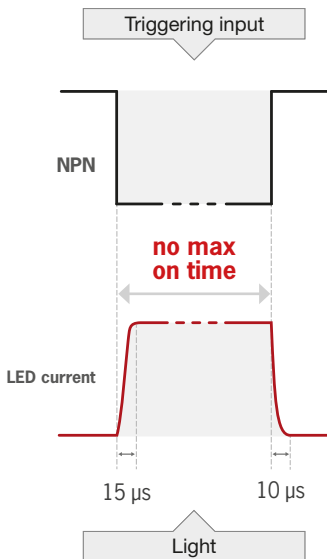
On time (t) & duty cycle (D)
in UV mode.

UV COLOUR



Rise/Fall times in UV Mode
when under NPN
for UV strobe control.

WHITE COLOUR



Rise/Fall times in white Mode
(CW & Strobe) when under NPN
for strobe control.



LMDX103 & LMDX203

OPERATING INSTRUCTIONS

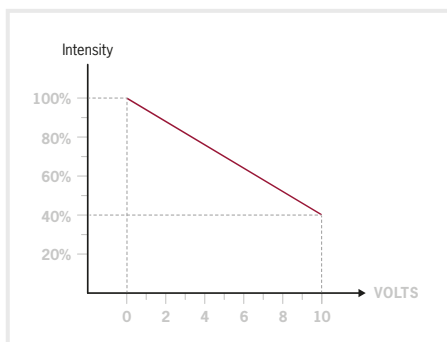
P6/8

■ PROTECTION IN UV MODE

If a trigger signal of more than 10ms is applied, the LED will only remain on for a maximum of 10ms.

Duty cycle protection: you can set a 10% duty cycle max. If this is exceeded, internal protection circuitry will activate.

■ DIMMING CONTROL (WHITE ONLY)



Dimming between 0 & 10 V.

With 0V applied to the Dimming pin, the product is at 100% of its lighting power. With 10V applied, it is reduced to 40% of lighting power.

■ POWER SUPPLY

Operational Voltage	24 V at the light input ($\pm 10\%$)
Absolute Maximum Voltage	30 V at the light input
Max. current consumption - NPN / White to UV switch signal lines	5 mA
Max. current consumption - dimming control line	2 mA

■ OPERATING CONDITIONS

-10° to +40°C / 80% of humidity without condensation. Not for outdoor use.

No thermal shock (maximum temperature variation: 10°C in 24h).



■ USER SAFETY



Do not modify or dismantle all or part of the product.

Do not remove the dome or the longpass filter. The dome shrouds all UV light from the LED source. UV illumination is brighter than it may appear, especially when strobed.

Respect the power supply voltages and the connection terminals.

Ensure power supply is switched off whilst connecting product and turn on only once product is fully connected. Failure to do this may damage the product and invalidate the Warranty

Do not stare at the lighting source directly.

Follow advice below for installation to minimise operator exposure to the light source.

INSTALLATION GUIDANCE:

- Forbid or limit the direct access to the lighting source (exposure into the radiation axis).
- Establish a security perimeter to prevent the operators from approaching the lighting source beyond the recommendations of the manufacturer.
- If the workstation permits it, introduce a filter that will stop the lighting radiation under a fixed or adjustable frame between the source and the operator. When these measures cannot be implemented, supply the operators with glasses (class 4).

It is the responsibility of the persons installing this product to ensure that all means possible (such as those stated above) have been implemented to reduce exposure of the machine operators to the light emitted from this product.

■ EQUIPMENT MAINTENANCE

CLEANING (when the product is switched off)

Please use a soft and dry cloth. Do not use any abrasive material. Do not use any cleaning solvent or aggressive chemical product. wenglorTPL recommends to use isopropyl alcohol.

■ PRODUCT LIFETIME

LED lifetime can typically be increased using strobe mode where possible. Strobing the light or turning the illumination on and off (using PNP or NPN lines) allows less temperature build up at the LED junction. The junction temperature of the LED is directly correlated with the lifetime of the LED chip. Maximum ambient air temperature = maximum 40°C/104°F.

LEDs naturally lose some intensity over time because of heat. Using the dimming and setting a reference brightness is a method for keeping the brightness level constant over a very long time, especially on brightness critical applications. wenglorTPL products have been integrated in factories since 2006, many of which are still in operation today. LED lifetime and heat management are at the forefront of our design considerations.

wenglorTPL

wenglor Straße 3
88069 Tettnang
Germany

+49 (0)7542 5399 800

support@wenglor.com



www.wenglor.com