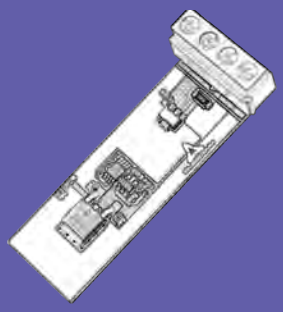
Technical data sheet

Gral Driver QR-Light®

QR-Light

GLORYTECH SAS
N° TVA IC FR 19 823712427
RCS Paris 823712427



Gral Driver QR-Light® has a high energy efficiency. It has been designed to work with indoor and outdoor LED based illumination.

PRODUCT DESCRIPTION:

Gral Driver QR-Light® transforms lighting into an indoor geolocation system. Either integrated in the LED driver's housing or connected externally to the LED driver and lamps, the **Gral Driver QR-Light®** has been designed for easy installation and maintenance.
Gral Driver QR-Light® works according to IEEE 802.15.7 standard for **Visible Light Communications (VLC)** as well as to Euro-pean Union norms and directives.

Type of product	Geolocation transceiver
Main characteristics	Processor core 32MHz.
Communication standard	IEEE 802.15.7

VLC CHARACTERISTICS

OPERATING CONDITIONS

Working temperature Tw	-20°C<Tw< 85°C
Humidity	as driver's or LED fixture's housing
Storage temperature	-20°C<Tw< 85°C

VLC failure	yes
Overvoltage	yes
Input reverse connections	yes

PROTECTION OF LED

INPUT/OUTPUT CONNECTORS

Input	Soldering on electric track for integration inside a driver or via terminal blocks (5 mm 12-100 VDC)
Output	Soldering on electric track for integration inside a driver or via terminal blocks (5 mm 12-100 VDC)

DC Voltage	15 to 300VDC
Current	2A max
LED's Driver‡minimal power	1,5 W
LED's Driver‡ maximum power	150W

INPUT SPECIFICATIONS

*Note: **Gral Driver QR-Light®** is not compatible with PWM dimming LED drivers. ‡Optimal energetic efficiency increases with the lamp's power.

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OUTPUT SPECIFICATIONS

DC Voltage	15-300VDC
Maximum Current	2A
Maximum Power Consumtion	0,7 W
VLC Response time	<1s

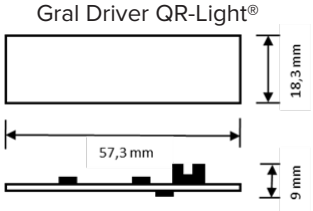
STANDARDS AND CERTIFICATIONS

CEM:	EN55015; EN61547; EN55022; EN55024
Electric safety:	EN60598; EN61347; EN60950
Photo-biological safety:	EN62471.
Others: RoHS.R&TTE (Radio).DEEE.	

MECHANICAL CHARACTERISTICS (without housing)

Length (mm)	57,3
Wide (mm)	18,3
High (mm)	9
Weight (g)	4,7

Gral Driver QR-Light®

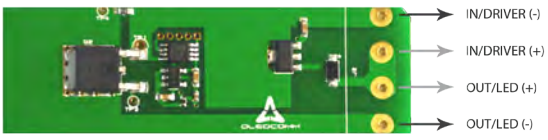


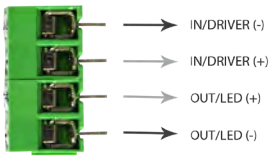
HOUSING (optional)

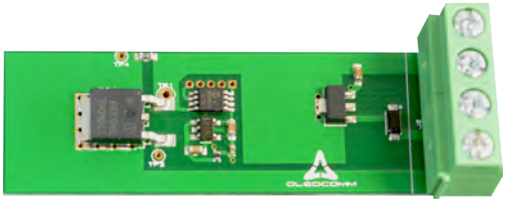
Type	Plastic
Color	black
Protection level	IP50

[Gral Driver QR-Light® electrical schemes]

Gral Driver QR-Light® without connectors and housing







Gral Driver QR-Light® inputs are connected to the LED driver

Gral Driver QR-Light® outputs are connected to the LED lighting

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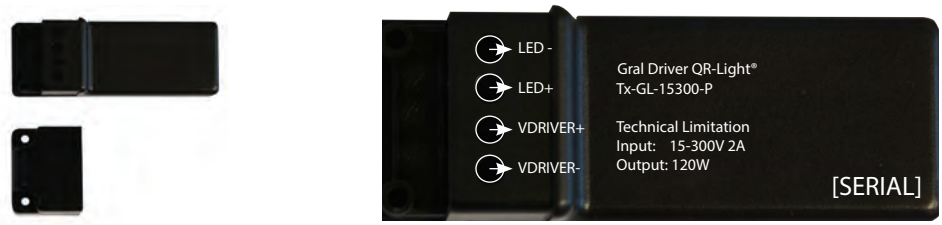
[Gral Driver QR-Light® installation]

Use Case of LED Public Lighting

For public lightening fixture, we strongly recommend our customers to protect the **Gral Driver QR-Light®** with a specific housing such as the following one :



Gral Driver QR-Light® housing overview and details

Moreover, the **Gral Driver QR-Light®** must :

- be installed in an IP64 environment
- be connected directly to LED (no capacitor or coil between the LED panel and the **Gral Driver QR-Light®** otherwise the VLC signal will suffer from distorsion or total elimination)
- not be used with PWM LED driver

Use Case of a LED tube

For LED tube, we strongly recommand our customers to choose the heat-shrinkable seal option and no connectors to mini-mize the volume occupied by the **Gral Driver QR-Light®**.

About **Gral Driver QR-Light®** and LED fixture compatibility

We inform our dear customers that reaching given performances (as distance detection or power efficiency) requires a specific parametrization per light fixture model.
To insure those performances, we strongly suggest to our customer to proceed to VLC certification of their lighting fixtures in our laboratory.
GLORYTECH cannot guaranty VLC communication in all environments.