Flat Light
Red light, 500 × 500 mm

LBBR501
Part Number



- **Easy and flexible installation**
- **High homogeneity**
- **High performance: high intensity even in continuous mode**
- **No external control required**

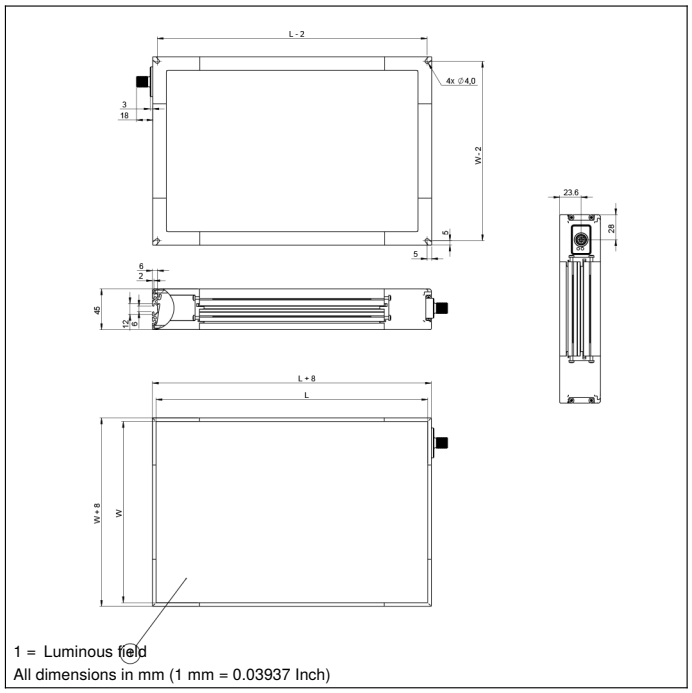
wenglor LBB backlights are ideally suited for Vision applications (e.g. silhouette lighting) in areas from 200 × 200 mm. They can be used in continuous mode or synchronized with the Machine Vision Camera in strobe mode via PNP or NPN inputs. Thanks to their diffused light, the backlights are ideal for applications with transmitted light or incident light. The illumination is extremely homogeneous with very small edges (4°mm), so the usable surface is very large and integration is very easy – thanks, among other things, to the T-slot mounting and anchor point on the entire housing of the illumination.

Technical Data

Optical Data	
Light Source	Red Light
Wavelength	630 nm
Red light output	144 W/m²
Environmental conditions	
Temperature Range	-10...40 °C
Storage temperature	-20...60 °C
Electrical Data	
Supply Voltage	21,6...26,4 V DC
Power	141 W
Current Consumption Continuous Mode (Ub = 24 V)	5,88 A
Rise time	15 µs
Fall time	10 µs
Input signal	NPN
Input signal	PNP
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Dimming	0....10 V ≙ 100...30%
OverDrive	no
Mechanical Data	
Luminous Field Length (L)	500 mm
Luminous Field Width (W)	500 mm
Luminous Field	500 × 500 mm
Housing Material	Aluminum, anodised
Housing Material	Plastic, ABS-GF
Degree of Protection	IP50
UL Enclosure Type	1
Optic Cover	Plastic, PMMA
Connection	M12 × 1; 5-pin
Max. cable lenght	10 m
Function	
Operating modes	Continuous, Strobe
Connection Diagram No.	007
Suitable Mounting Technology No.	926

Complementary Products

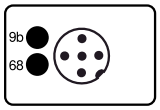
ZC4G003 connection cable
ZDCG004 connection cable
ZDCG005 connection cable



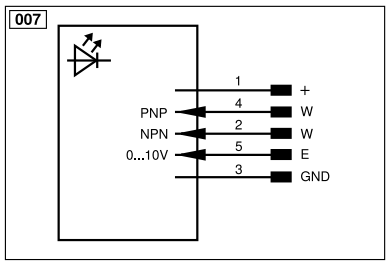
1 = Luminous field
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

T16



68 = Power LED
9b = Strobe Mode Indicator



Legend					
+	Supply Voltage +	PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)
–	Supply Voltage 0 V	nc	Not connected	ENBRS422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENA	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	ENB	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W–	Ground for the Trigger Input	AMAX	Digital output MAX
V̄	Contamination/Error Output (NC)	O	Analog Output	AOK	Digital output OK
E	Input (analog or digital)	O–	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
R	Reset input	AMV	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN0 RS422	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow

Specifications are subject to change without notice V4-14.07.2026