## Bar Light White light, 250 mm

# **OPT2401**

Part Number



- Create patented curve effect to reduce LED hot spots
- Flexibility: expand the beam angle with an Angle Changer
- No external control required
- Overdrive

wenglor bar lights can be configured for almost any application. The direct lights provide a perfect balance between brightness and even light distribution, so the luminaires can be used at both small and large working distances. The bar light can be positioned around the product to create lighting effects such as bright field, low angle of incidence, dark field and dome lighting. It can also be used for some line scan applications. The bar lights can be operated in continuous mode with high intensity or synchronized with the Machine Vision Camera in strobe mode with increased luminosity (overdrive). When the bar lights are combined with the angle changers, the beam angle can then be increased and the lighting can be designed flexibly and controlled via the visual field.

#### **Technical Data**

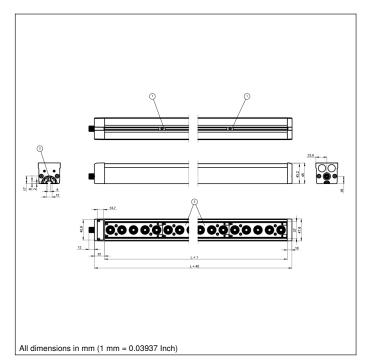
Optical Data         Light Source       White Light         Color temperature       5800 K         Beam angle       ± 7 °         Light output       ≤ 87000 Lux         Compatible with       Angle Changer         Electrical Data       Electrical Data         Supply Voltage       21,630 V DC         Power       14,4 W         Peak power       57,6 W         Current Consumption Continuous Mode (Ub = 24 V)       0,6 A         Current consumption strobe mode (Ub = 24 V)       2,4 A         Flash Duration       30 ms         Duty Cycle       < 0,2         Duty cycle       15 μs         Fall time       10 μs         Input signal       PNP/NPN         Temperature Range       040 °C         Storage temperature       -2060 °C         Short Circuit Protection       yes         Reverse Polarity Protection       yes         Overload Protection Pase       yes         Dimming       010 V ≜ 10030%         Overdrive       yes         Mechanical Data       Luminous Field Length (L)         Luminous Field Length (L)       250 mm         Aluminum, fiberglass-reinforced ABS <td< th=""><th>recillical Data</th><th></th></td<>	recillical Data				
Color temperature       5800 K         Beam angle       ± 7 °         Light output       ≤ 87000 Lux         Compatible with       Angle Changer         Electrical Data         Supply Voltage       21,630 V DC         Power       14,4 W         Peak power       57,6 W         Current Consumption Continuous Mode (Ub = 24 V)       0,6 A         Current consumption strobe mode (Ub = 24 V)       2,4 A         Flash Duration       30 ms         Duty Cycle       < 0,2         Duty cycle       15 μs         Fall time       10 μs         Input signal       PNP/NPN         Temperature Range       040 °C         Storage temperature       -2060 °C         Short Circuit Protection       yes         Reverse Polarity Protection       yes         Overload Protection       yes         Protection Class       III         Dimming       010 V ≜ 10030%         Overdrive       yes         Mechanical Data       Luminous Field Length (L)         Housing Material       Aluminum, fiberglass-reinforced ABS         Degree of Protection       IP65         Optic Cover       PMMA (high clarity)	Optical Data				
Beam angle ± 7 °  Light output ≤ 87000 Lux  Compatible with Angle Changer  Electrical Data  Supply Voltage 21,630 V DC  Power 14,4 W  Peak power 57,6 W  Current Consumption Continuous Mode (Ub = 24 V) 0,6 A  Current consumption strobe mode (Ub = 24 V) 2,4 A  Flash Duration 30 ms  Duty Cycle < 0,2  Duty cycle 15 μs  Fall time 10 μs  Input signal PNP/NPN  Temperature Range 040 °C  Storage temperature -2060 °C  Short Circuit Protection yes  Reverse Polarity Protection yes  Protection Class III  Dimming 010 V ≜ 10030%  Overdrive yes  Mechanical Data  Luminous Field Length (L) 250 mm  Aluminum, fiberglass-reinforced ABS  Degree of Protection PC  Degree of Protection PC  Max. cable lenght 150 m  Weight PC  Connection Diagram No.  Control Panel No.  DO7  Control Panel No.  DO7  Control Panel No.  DO7  T17	Light Source	White Light			
Light output Compatible with Angle Changer  Electrical Data  Supply Voltage Power Peak power Peak power Current Consumption Continuous Mode (Ub = 24 V) Current consumption strobe mode (Ub = 24 V) Plash Duration Supply Voltage Power Peak power S7,6 W Current consumption strobe mode (Ub = 24 V) Current consumption strobe mode (Ub = 24 V) Plash Duration S0 ms C0,2 Duty Cycle S15 μs Fall time S10 μs Input signal PNP/NPN Temperature Range Corrent Circuit Protection Person Protection Person Protection Class Supply Voltage  Mechanical Data Luminous Field Length (L) Housing Material Degree of Protection Poptic Cover PMMA (high clarity) Material Control Panel PC Connection M12 × 1; 5-pin Max. cable length Weight Poortine Control Diagram No. Control Panel No.  Control Panel No.  11,4 W C1,4 A C1,4 A C2,4 A C4 C4 C30 ms C4 C4 C4 C5 C7	Color temperature	5800 K			
Compatible with       Angle Changer         Electrical Data       21,630 V DC         Supply Voltage       21,630 V DC         Power       14,4 W         Peak power       57,6 W         Current Consumption Continuous Mode (Ub = 24 V)       0,6 A         Current consumption strobe mode (Ub = 24 V)       2,4 A         Flash Duration       30 ms         Duty Cycle       < 0,2	Beam angle	±7°			
Electrical Data  Supply Voltage 21,630 V DC  Power 14,4 W  Peak power 57,6 W  Current Consumption Continuous Mode (Ub = 24 V) 0,6 A  Current consumption strobe mode (Ub = 24 V) 2,4 A  Flash Duration 30 ms  Duty Cycle < 0,2  Duty cycle 15 μs  Fall time 10 μs  Input signal PNP/NPN  Temperature Range 040 °C  Storage temperature -2060 °C  Short Circuit Protection yes  Reverse Polarity Protection yes  Overload Protection yes  Protection Class III  Dimming 010 V ≜ 10030%  Overdrive yes  Mechanical Data  Luminous Field Length (L) 250 mm  Aluminum, fiberglass-reinforced ABS  Degree of Protection PC  Optic Cover PMMA (high clarity)  Material Control Panel PC  Connection M12 × 1; 5-pin  Max. cable lenght 150 m  Weight < 500 g  Function  Operating modes Continuous, Strobe  Connection Diagram No.  Control Panel No.  117	Light output	≤ 87000 Lux			
Supply Voltage       21,630 V DC         Power       14,4 W         Peak power       57,6 W         Current Consumption Strobe mode (Ub = 24 V)       0,6 A         Current consumption strobe mode (Ub = 24 V)       2,4 A         Flash Duration       30 ms         Duty Cycle       < 0,2	Compatible with	Angle Changer			
Power	Electrical Data				
Peak power  Current Consumption Continuous Mode (Ub = 24 V)  Current consumption strobe mode (Ub = 24 V)  Flash Duration  Duty Cycle  Duty cycle  Input signal  Temperature Range  Storage temperature  Short Circuit Protection  Protection Class  Dimming  Overdrive  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Pochoace  Connection  Max. cable length  Weight  Function  Operating modes  Control Panel No.  Control Panel No.  10, 6 A  0,6 A  0,6 A  2,4 A  Flash Duration  30 ms  Dus, 4 b  2,4 A  Flash Duration  30 ms  No. 6 c  20,2  Duty cycle  15 $\mu$ s  20, 80 °C  Short Circuit Protection  9 ves  PNP/NPN  10,40 °C  -2060 °C  Short Circuit Protection  9 ves  Wes  -2060 °C  Short Circuit Protection  9 ves  Wes  -2060 °C  -2060 °C  Short Cover  9 ves  Wes  Machanical Data  Luminous  Aluminum, fiberglass-reinforced ABS  IP65  PMMA (high clarity)  PC  Connection  Max. cable lenght  150 m  4. ves  -2060 °C  Short Cover  PMMA (high clarity)  Thom  Vesight  Control Panel No.  -2060 °C  Control Panel No.  -2060 °C  -20	Supply Voltage	21,630 V DC			
Current Consumption Continuous Mode (Ub = 24 V) 0,6 A Current consumption strobe mode (Ub = 24 V) 2,4 A Flash Duration 30 ms Duty Cycle $< 0,2$ Duty cycle $  15 \mu s  $ Fall time $  10 \mu s  $ Input signal PNP/NPN Temperature Range $  040 \text{ °C}  $ Storage temperature $  -2060 \text{ °C}  $ Short Circuit Protection $  -2060 \text{ °C}  $ Short PMA (high clarity) PMA (high clarity) PMA (high clarity) PC Connection $  -2060 \text{ °C}  $ Short Circuit Protection $  -2060 \text{ °C}  $ Short Circuit Protection $  -2060 \text{ °C}  $ Short PMA (high clarity) PMA (high clarity) PC Connection Diagram No. $  -2060 \text{ °C}  $ Short PMA (high clarity)	Power	14,4 W			
Current consumption strobe mode (Ub = 24 V)  Flash Duration  Duty Cycle  Outy cycle  15 $\mu$ s  Fall time  Input signal  PNP/NPN  Temperature Range  O40 °C  Storage temperature  Storage temperature  Poverload Protection  Ves  Protection Class  III  Dimming  Overdrive  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Operating modes  Connection  Max. cable length  Weight  Function  Operating modes  Control Panel No.  Over  Overload Protection  Oporous AR  Aluminum, fiberglass-  reinforced ABS  IFO  Control Panel No.  Overdrive  Control Panel No.	Peak power	57,6 W			
Flash Duration 30 ms  Duty Cycle $< 0,2$ Duty cycle $  15 \mu s  $ Fall time $  10 \mu s  $ Input signal PNP/NPN  Temperature Range $  040  ^{\circ}C  $ Storage temperature $  -2060  ^{\circ}C  $ Short Circuit Protection $  yes  $ Reverse Polarity Protection $  yes  $ Overload Protection $  yes  $ Dimming $  010  V \triangleq 10030\%  $ Overdrive $  yes  $ Mechanical Data  Luminous Field Length (L) $  250  \text{mm}  $ Aluminum, fiberglass-reinforced ABS  Degree of Protection $  P65  $ Optic Cover $  PMMA  $ (high clarity)  Material Control Panel $  PC  $ Connection $  M12 \times 1; 5 \text{-pin}  $ Max. cable length $  150  \text{m}  $ Weight $  < 500  \text{g}  $ Function  Operating modes $  Continuous  $ Strobe  Connection Diagram No.  O07	Current Consumption Continuous Mode (Ub = 24 V)	0,6 A			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Current consumption strobe mode (Ub = 24 V)	2,4 A			
Duty cycle       15 μs         Fall time       10 μs         Input signal       PNP/NPN         Temperature Range       040 °C         Storage temperature       -2060 °C         Short Circuit Protection       yes         Reverse Polarity Protection       yes         Overload Protection       yes         Protection Class       III         Dimming       010 V $\triangleq$ 10030%         Overdrive       yes         Mechanical Data         Luminous Field Length (L)       250 mm         Housing Material       Aluminum, fiberglass-reinforced ABS         Degree of Protection       IP65         Optic Cover       PMMA (high clarity)         Material Control Panel       PC         Connection       M12 × 1; 5-pin         Max. cable lenght       150 m         Weight       < 500 g	Flash Duration	30 ms			
Fall time $10  \mu s$ Input signal PNP/NPN Temperature Range $040  ^{\circ} C$ Storage temperature $-2060  ^{\circ} C$ Storage temperature $-2060  ^{\circ} C$ Short Circuit Protection yes Reverse Polarity Protection yes Userotection Uses III Dimming $010  V \triangleq 10030\%$ Overdrive yes Mechanical Data Luminous Field Length (L) $-250  \text{mm}$ Aluminum, fiberglassreinforced ABS Degree of Protection IP65 Degree of Protection IP65 PMMA (high clarity) Material Control Panel PC Connection M12 $\times$ 1; 5-pin Max. cable length $-250  \text{mm}$ Aluminum, Strobe Connection Diagram No. $-250  \text{mm}$ Control Panel No. $-250  \text{mm}$	Duty Cycle	< 0,2			
Input signal  Temperature Range  Storage temperature  Storage Total Storage  Storage temperature  Storage Total Storage  Storage temperature  Storage Storage  Storage temperature  Storage Storage  Storage	Duty cycle	15 <i>μ</i> s			
Temperature Range  Storage temperature  Short Circuit Protection  Reverse Polarity Protection  Overload Protection  Protection Class  Dimming  Owerdrive  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Optic Cover  Material Control Panel  Connection  Max. cable length  Weight  Function  Operating modes  Control Panel No.  O40 °C  2060 °C  yes  Mes  -2060 °C  Oyes  yes  III  Dours  010 V ≜ 10030%  yes  Mall III  250 mm  Aluminum, fiberglass-reinforced ABS  IP65  PMMA (high clarity)  PC  Connection  M12 × 1; 5-pin  Max. cable length  Veight  Control Panel No.  Oo7  Control Panel No.  T17	Fall time	10 μs			
Storage temperature       -2060 °C         Short Circuit Protection       yes         Reverse Polarity Protection       yes         Overload Protection       yes         Protection Class       III         Dimming       010 V ≜ 10030%         Overdrive       yes         Mechanical Data       Luminous Field Length (L)         Luminous Field Length (L)       250 mm         Housing Material       Aluminum, fiberglass-reinforced ABS         Degree of Protection       IP65         Optic Cover       PMMA (high clarity)         Material Control Panel       PC         Connection       M12 × 1; 5-pin         Max. cable lenght       150 m         Weight       < 500 g	Input signal	PNP/NPN			
Short Circuit Protection  Reverse Polarity Protection  Overload Protection  Protection Class  Dimming  Overdrive  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Optic Cover  Material Control Panel  Connection  M12 × 1; 5-pin  Max. cable length  Weight  Function  Operating modes  Control Panel No.  Control Panel No.  Optic Cover  Connection Diagram No.  Control Panel No.	Temperature Range	040 °C			
Reverse Polarity Protection  Overload Protection  Protection Class  III  Dimming  O10 V ≜ 10030%  Overdrive  yes  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Optic Cover  Material Control Panel  Connection  M12 × 1; 5-pin  Max. cable length  Weight  Veson  Control Diagram No.  Control Panel No.  Oot.  Oot.  Oot.  Control Panel No.  Oot.  Oot	Storage temperature	-2060 °C			
Overload Protection       yes         Protection Class       III         Dimming       010 V ≜ 10030%         Overdrive       yes         Mechanical Data         Luminous Field Length (L)       250 mm         Housing Material       Aluminum, fiberglass-reinforced ABS         Degree of Protection       IP65         Optic Cover       PMMA (high clarity)         Material Control Panel       PC         Connection       M12 × 1; 5-pin         Max. cable lenght       150 m         Weight       < 500 g	Short Circuit Protection	yes			
Protection Class  Dimming  O10 V ≜ 10030%  Ves  Mechanical Data  Luminous Field Length (L)  Housing Material  Degree of Protection  Optic Cover  PMMA (high clarity)  Material Control Panel  Connection  M12 × 1; 5-pin  Max. cable lenght  Weight  Veight  Vestimates  Continuous, Strobe  Connection Diagram No.  Control Panel No.  III  250 mm  Aluminum, fiberglass-reinforced ABS  IP65  PMMA (high clarity)  PC  Contection  M12 × 1; 5-pin  T50 m  Continuous, Strobe	Reverse Polarity Protection	yes			
Dimming       010 V ≜ 10030%         Overdrive       yes         Mechanical Data       250 mm         Luminous Field Length (L)       250 mm         Housing Material       Aluminum, fiberglassreinforced ABS         Degree of Protection       IP65         Optic Cover       PMMA (high clarity)         Material Control Panel       PC         Connection       M12 × 1; 5-pin         Max. cable lenght       150 m         Weight       < 500 g	Overload Protection	yes			
Overdrive yes  Mechanical Data  Luminous Field Length (L) 250 mm  Aluminum, fiberglass- reinforced ABS  Degree of Protection IP65  Optic Cover PMMA (high clarity)  Material Control Panel PC  Connection M12 × 1; 5-pin  Max. cable length 150 m  Weight < 500 g  Function  Operating modes Continuous, Strobe  Connection Diagram No.  O07  Control Panel No.	Protection Class	III			
Mechanical Data       Luminous Field Length (L)     250 mm       Housing Material     Aluminum, fiberglassreinforced ABS       Degree of Protection     IP65       Optic Cover     PMMA (high clarity)       Material Control Panel     PC       Connection     M12 × 1; 5-pin       Max. cable lenght     150 m       Weight     < 500 g	Dimming	010 V ≙ 10030%			
Luminous Field Length (L)  Housing Material  Degree of Protection  Optic Cover  Material Control Panel  Connection  M12 × 1; 5-pin  Max. cable length  Weight  Veight  Connection  Operating modes  Connection Diagram No.  Control Panel No.	Overdrive	yes			
Housing Material  Degree of Protection  Optic Cover  Material Control Panel  Connection  M12 × 1; 5-pin  Max. cable lenght  Weight  Function  Operating modes  Connection Diagram No.  Control Panel No.	Mechanical Data				
Degree of Protection IP65 Optic Cover PMMA (high clarity) Material Control Panel PC Connection M12 × 1; 5-pin Max. cable lenght 150 m Weight < 500 g Function Operating modes Continuous, Strobe Connection Diagram No. Control Panel No.	Luminous Field Length (L)				
Degree of Protection IP65 Optic Cover PMMA (high clarity) Material Control Panel PC Connection M12 × 1; 5-pin Max. cable lenght 150 m Weight < 500 g Function Operating modes Continuous, Strobe Connection Diagram No. Control Panel No.	Housing Material	Aluminum, fiberglass- reinforced ABS			
Material Control Panel PC Connection M12 × 1; 5-pin Max. cable lenght 150 m Weight < 500 g Function Operating modes Continuous, Strobe Connection Diagram No. Control Panel No.	Degree of Protection				
Connection M12 × 1; 5-pin  Max. cable lenght 150 m  Weight < 500 g  Function  Operating modes Continuous, Strobe  Connection Diagram No.  Control Panel No.  T17	Optic Cover	PMMA (high clarity)			
Max. cable lenght 150 m Weight < 500 g  Function Operating modes Continuous, Strobe  Connection Diagram No. 007 Control Panel No. T17	Material Control Panel	PC			
Weight < 500 g  Function  Operating modes Continuous, Strobe  Connection Diagram No.  Control Panel No.  T17	Connection	M12 × 1; 5-pin			
Function Operating modes Continuous, Strobe Connection Diagram No. Control Panel No. T17	Max. cable lenght	150 m			
Operating modes Continuous, Strobe  Connection Diagram No.  Control Panel No.  T17	Weight	< 500 g			
Connection Diagram No.  Control Panel No.  T17	Function				
Control Panel No.	Operating modes	Continuous, Strobe			
Control Panel No.	Connection Diagram No.	007			
	Suitable Mounting Technology No.	925			

### **Complementary Products**

Angle Changer OPT2408 - OPT2417-4

Swivel Mount OPT2432





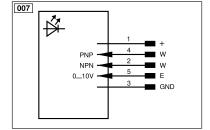
#### Ctrl. Panel

#### **T17**



68 = supply voltage indicator

9b = Strobe Mode Indicator



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	ENB	Encoder B
Α	Switching Output (NO)	W	Trigger Input	Amin	Digital output MIN
Ā	Switching Output (NC)	W-	Ground for the Trigger Input	Амах	Digital output MAX
V	Contamination/Error Output (NO)	0	Analog Output	Аок	Digital output OK
⊽	Contamination/Error Output (NC)	0-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
Т	Teach Input	Аму	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	а	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
<b>②</b>	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
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARS422	Encoder A/Ā (TTL)		•





