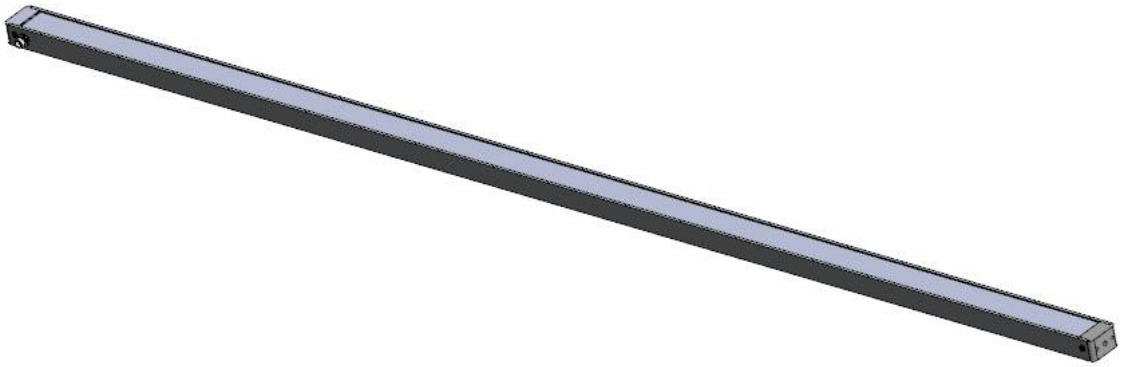

(Image for illustrative purposes only)

Datasheet

Long LED bar lights 50mm wide

series:	10580701
Versions:	V1
Release date:	29 Apr 2018
	Vision Hardware Partner De Steiger 59 1351AD Almere The Netherlands www.VisionHardwarePartner.nl info@VisionHardwarePartner.nl

Foreword / disclaimer

This documentation has been compiled with all possible care. Vision Hardware Partner assumes no responsibility for any errors in this manual and/or the consequences of an erroneous interpretation of the instructions.
In the interest of progress, Vision Hardware Partner reserves the right to perform technical changes without prior notice.
Vision Hardware Partner accepts no liability for damage and/or problems arising from the use of spare parts not supplied by Vision Hardware Partner.
Please notify Vision Hardware Partner (support@VisionHardwarePartner.nl) if you become aware of any errors in this manual or if if you feel that a certain topic requires more detailed documentation.

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This language version of the manual is verified by the manufacturer (Original manual).

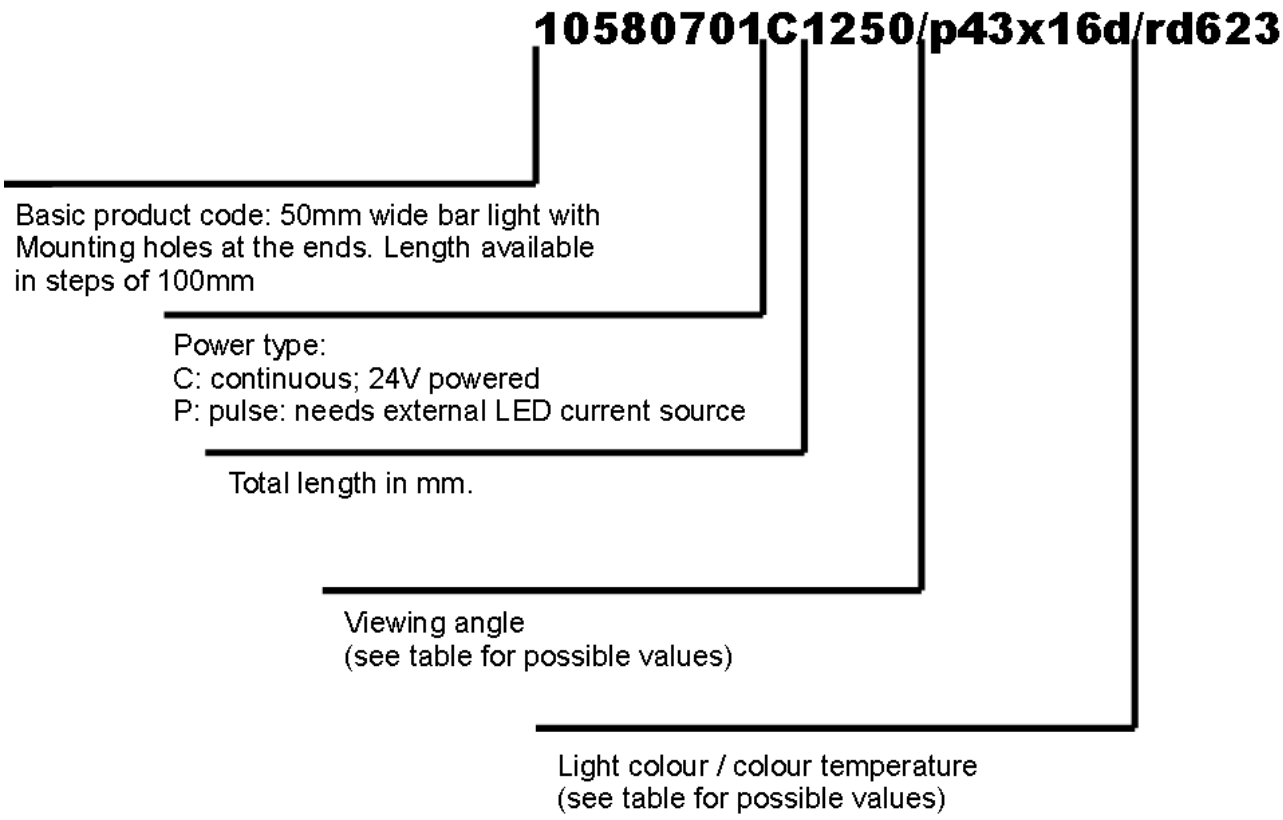
Please provide feedback

Dear user,

Vision Hardware Partner has a rich experience of using machine vision products in industrial environments. We try to use this experience to create products which are robust, easy to use and suit your requirements while still being affordable.
However, not all applications are the same and not all users have the same requirements. In order to make sure that the needs of as many as possible customers are served it is important to keep in touch with them. So if you can spare a minute please tell us what you do and do not like about our product. This way you will help us to keep on improving our solutions for your machine vision challenges.
You can do this by sending a e-mail to feedback@VisionHardwarePartner.nl.

Thanks in advance.

Product type specification



General properties

Dimensions:	Length x 50 x 30 mm (order part to lenght)
Protection grade:	IP61
Cable lenght	Cables separately ordered

Power type and connections

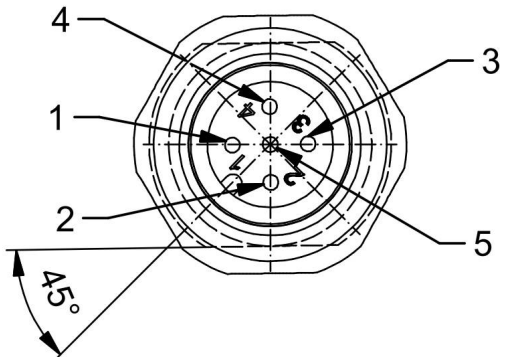
caution: only the C type can be used without an external LED-driver

Applying 24V power to the P type will damage the LEDs.

The P type is intended for use in setups with pulsing (Photo flash) illumination. During the pulse the LEDs are driven at a higher than nominal power. The LEDs are not damaged because the average power is still below the nominal power.

To do this a pulse LED driver like the Lightning series LED drivers is needed.

Connections for the continuous (“C”) type



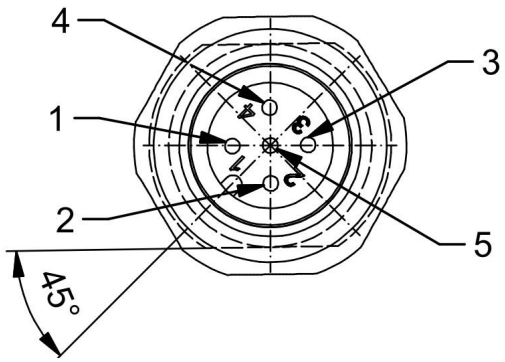
Using a standard sensor cable

Connector pin nr.	Colour	Cable conductor no	description
1	Brown		+power (20-28V)
3	blue		0V power
4	Black		+ enable (3-28V)

Using a custom cable with DIN 47100 colours

Connector pin nr.	Colour	Cable conductor no	description
1	Brown	2	+power (20-28V)
3	white	1	0V power
4	green	3	+ enable (3-28V)

Connections for the pulse / passive (“P”) type

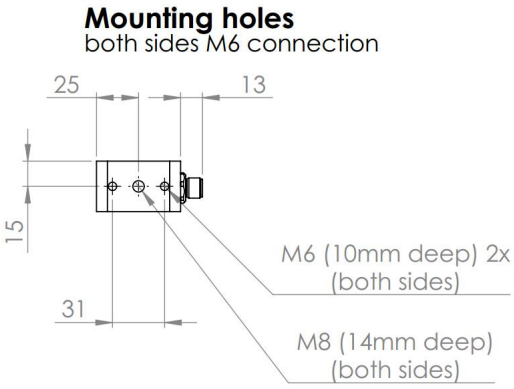


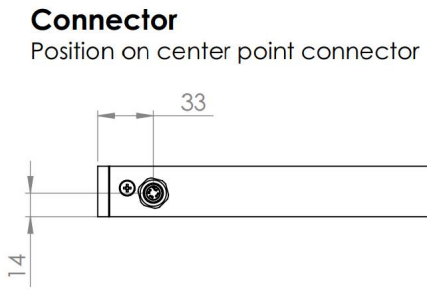
The P type lamp can only be used with an external LED driver. Do NOT apply 24V directly to the lamp. This will damage it.

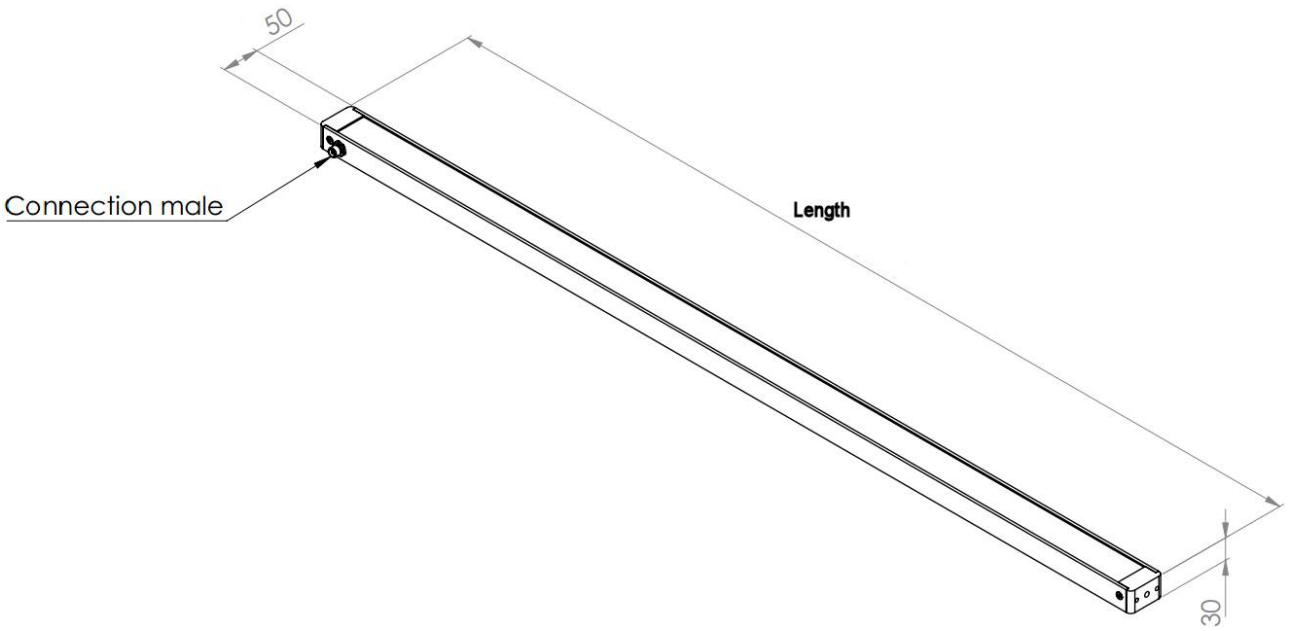
		Cable type	
Pin no.	Signal name	2 cond.: brown/blue	2 cond.: brown / white
1	Lamp +	Brown	Brown
2	Lamp -	blue	White
3	Lamp +	Brown	Brown
4	Lamp -	Blue	White
5	nc		

Always use all 4 pins of the connector in order to equally spread the current over the pins.

dimensions







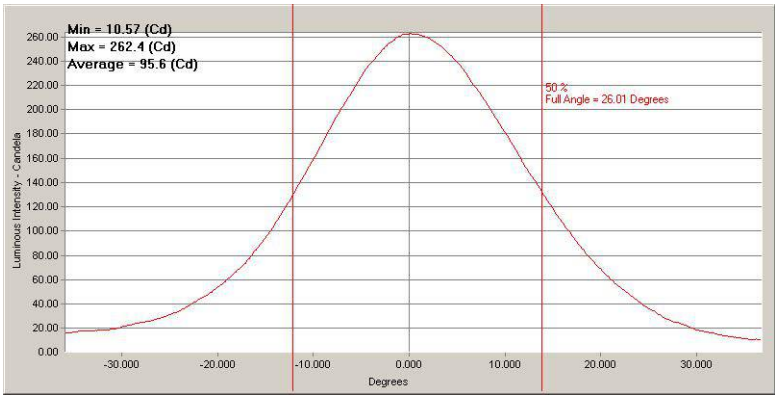
Example type no.	Length (mm)	Light emission length (mm)
10580701C**0650**/20d/rd660	650	600
10580701C**0750**/20d/rd660	750	700
..		
…		
10580701C24**50**/20d/rd660	2450	2400
10580701C25**50**/20d/rd660	2550	2500
….		

Viewing angles

General information on viewing angles

The light bars contain a number of LEDs in line. The specified viewing angle applies to each single LED in the line.

The below image shows the typical light output vs angle of a specific optic.



The light output decays gradually with the angle. The industry standard for specifying the viewing angle is **F**ull **W**idth **H**alf **M**aximum (FWHM). The maximum intensity is usually at the 0 degrees (centre) point. The viewing angle is specified to include the area in which the light intensity is between 50 and 100% of the maximum.

Vision Hardware Partner thinks that FWHM angles are a less convenient specification for machine vision. If an application is calculated using FWHM the light intensity at the borders of the field of view would be half the intensity in the centre. The software would have to deal with the factor 2 intensity difference. That is why we also specify the full width at 75% of the maximum (FW75%) whenever we can.

There is two types of possible optics. Symmetrical and asymmetrical. The most commonly used type is the symmetrical type. It projects a circle of light. The asymmetrical types will project an ellipse. They have different angles on the X and Y axis.

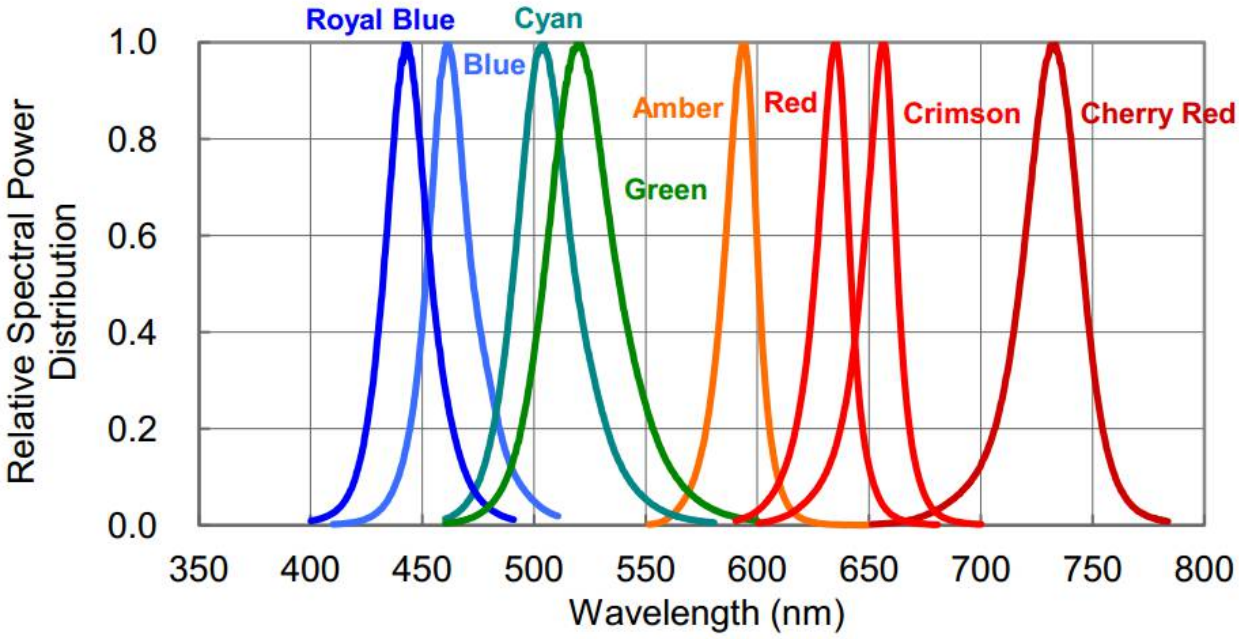
Available viewing angles

Example type no.	Angle X (FWMH)	Angle X (FW75%)	Angle Y (FWMH)	Angle Y (FW75%)
10580701C0650/**20d**/rd660	20	10		
10580701C0650/**26d**/rd660	26	20		
10580701C0650/**37d**/rd660	37	26		
10580701C0650/**77d**/rd660	77	70		
10580701C0650/**p43x16d**/rd660	43		16	
Other angles on request				

Please note: These viewing angles are indicative only. The actual viewing angle depends on the light colour. Shorter wavelengths will give smaller angles.

Colour and wavelength information

Example type no.	Colour	Peak Wavelength / colour temp.
10580701C0650/20d/Vi**410**	Violet	410nm
10580701C0650/20d/**bl455**	Blue	455nm
10580701C0650/20d/**bl465**	Blue	465nm
10580701C0650/20d/**Cy505**	Cyan	505nm
10580701C0650/20d/**Gr525**	Green	525nm
10580701C0650/20d/**Am592**	Amber	592nm
10580701C0650/20d/**Rd623**	Red	623nm
10580701C0650/20d/**Rd660**	Red (Crimson)	660nm
10580701C0650/20d/**IR730**	Red / infrared (cherry red)	730nm
10580701C0650/20d/**IR760**	infrared	760nm
10580701C0650/20d/**IR810**	infrared	810nm
10580701C0650/20d/**IR850**	infrared	850nm
10580701C0650/20d/**Wh33**	Warm white	3300K
10580701C0650/20d/**WH42**	White	4200K
10580701C0650/20d/**Wh50**	White	5000K
10580701C0650/20d/**Wh62**	White	6200K
Other wavelengths: ask		



electrical characteristics continuous (active) “C” version

	Test cond.	min	nom	max	unit
Input voltage		20	24	28	V
Power consumption per 100mm light lenght			4		W
Input voltage enable high			3	28	V
Input voltage enable low				2	V
Enable input current		7	10	12	mA