

# Standard Laser Diode Modules and Collimators



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**Adjustable focus**

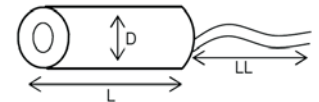


**Applications:** - Positioning  
- Metrology

**Features:** - Threaded focus adjustment  
- small size

D (mm)	11
L (mm)	29 <sup>1)</sup>
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1129F-	635-1-E-K	635-5-E-K	650-1-E-K	650-5-E-K
Order number	1206000021	1206000022	1206000023	1206000024
Wavelength	635 nm	635 nm	655 nm	655 nm
Optical output power	< 1 mW	< 5 mW	< 1 mW	< 5 mW
Beam diameter @ 1/e <sup>2</sup>	3.4 x 0.8 mm	3.4 x 0.8 mm	3.4 x 0.8 mm	3.4 x 0.8 mm
Operating current	45 mA max.	65 mA max.	45 mA max.	45 mA max.
Beam divergence	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.
Beam deviation	25 mrad max.	25 mrad max.	25 mrad max.	25 mrad max.
Laser protection class	2	3R	2	3R
Operating voltage Vcc	5 V DC	5 V DC	5 V DC	5 V DC
Focal length range	20 mm min.	20 mm min.	20 mm min.	20 mm min.
Operating temperature	5 °C to 50 °C	5 °C to 50 °C	5 °C to 65 °C	5 °C to 65 °C
Storage Temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C
Lens type	Aspherical polymer lens			
Casing	Aluminium black anodized			
Beam setting	Adjustable focus			

**Adjustable focus**

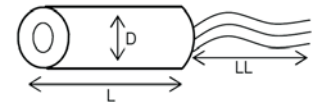
- Applications:**
- Industrial alignment
  - Positioning
  - Light barriers
  - Metrology
  - Construction laser applications
  - Triangulation

- Features:**
- Modulation / Power adjustment via analog input  
Standard: 0 - 25 kHz, Optional up to 300 kHz
  - Threaded focus adjustment
  - Diaphragm<sup>1)</sup>
  - Insulated casing



D (mm)	12
L (mm)	55 <sup>2)</sup>
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1255-FB-	635-5-E-K-L	635-28-E-K-L	650-1-E-G-L	658-28 -E-G-L
Order number	1206000003	1206000005	1206000008	1206000012
Wavelength	635 nm	638 nm	665 nm	658 nm
Optical output power	< 5 mW <sub>max.</sub>	28 mW <sub>max.</sub>	< 1 mW <sub>max.</sub>	28 mW <sub>max.</sub>
Beam diameter @ 1/e <sup>2</sup>	3.4 x 0.8 mm	3.4 x 0.8 mm	3.4 x 0.8 mm	2 x 0.9 mm
Beam diameter @ 1/e <sup>2</sup> @ 20mm	45 µm	45 µm	45 µm	40 µm
Operating current	75 mA <sub>max.</sub>	120 mA <sub>max.</sub>	55 mA <sub>max.</sub>	95 mA <sub>max.</sub>
Beam divergence	0.8 mrad <sub>max.</sub>	0.8 mrad <sub>max.</sub>	0.8 mrad <sub>max.</sub>	0.8 mrad <sub>max.</sub>
Beam deviation	25 mrad <sub>max.</sub>	25 mrad <sub>max.</sub>	25 mrad <sub>max.</sub>	25 mrad <sub>max.</sub>
Laser protection class	3R @ max. P <sub>opt</sub>	3B @ max. P <sub>opt</sub>	2 @ max. P <sub>opt</sub>	3B @ max. P <sub>opt</sub>
Operating voltage Vcc	5 V DC	5 V DC	5 V DC	5 V DC
Focal length range	20 mm <sub>min.</sub>	20 mm <sub>min.</sub>	20 mm <sub>min.</sub>	20 mm <sub>min.</sub>
Operating temperature	5 °C to 50 °C	5 °C to 50 °C	-10 °C to 70 °C	-10 °C to 60 °C
Storage Temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 85 °C	-25 °C to 85 °C
Lens type	Aspherical polymer lens		Aspherical glass lens	
Casing	Aluminium black anodized		Aluminium black anodized	
Beam setting	Adjustable focus		Adjustable focus	

<sup>1)</sup> optional  
1 mm - 306...929  
1,5 mm - 306...864

<sup>2)</sup> typ. @ collimated beam

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
Note: The above product specifications are subject to change without notice.

**Collimated**

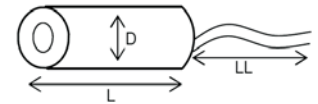
- Applications:**
- Positioning
  - Measurement
  - Target laser



- Features:**
- small size

D (mm)	8
L (mm)	25
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C		
Modul IMM-0825-	658-28-E-K	635-1-E-K
Order number	1203000178	1203000175
Wavelength	658 nm	635 nm
Optical output power	28 mW <sub>max.</sub>	0.99 mW <sub>max.</sub>
Beam diameter @ 1/e <sup>2</sup>	3.4 x 0.8 mm <sup>2</sup>	3.4 x 0.8 mm <sup>2</sup>
Beam setting	Collimated	Collimated
Operating current	100 mA <sub>max.</sub>	45 mA
Beam divergence	0.8 mrad <sub>max.</sub>	0.8 mrad <sub>max.</sub>
Beam deviation	30 mrad <sub>max.</sub>	30 mrad <sub>max.</sub>
Laser protection class	3B	2
Operating voltage Vcc	3 V or 5 V DC	3 V or 5 V DC
Operating temperature	5 °C to 45 °C	5 °C to 45 °C
Storage temperature	-15 °C to 70 °C	-25 °C to 70 °C
Lens type	Aspherical polymer lens	Aspherical polymer lens
Casing	Aluminium black anodized	Aluminium black anodized

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Collimated**

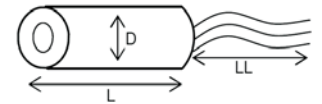
**Applications:** - Positioning  
- Construction laser applications



**Features:** - Modulation / Power adjustment via analog input  
Standard: 0 - 25 kHz, Optional up to 300 kHz

D (mm)	10
L (mm)	40
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1040-	635-1-R-K-L	635-3-R-K-L	650-1-R-K-L	785-0,57-R-K-L
Order number	1206000013	1206000014	1206000015	1203000099
Wavelength	635 nm	635 nm	650 nm	788 nm
Optical output power	< 1 mW <sub>max.</sub>	3 mW <sub>max.</sub>	< 1 mW <sub>max.</sub>	0.57 mW <sub>max.</sub>
Beam diameter @ 1/e <sup>2</sup>	Ø 2 mm	Ø 2 mm	Ø 2 mm	Ø 2 mm
Operating current	50 mA <sub>max.</sub>	75 mA <sub>max.</sub>	45 mA <sub>max.</sub>	50 mA <sub>max.</sub>
Beam divergence	0.5 mrad <sub>max.</sub>	0.5 mrad <sub>max.</sub>	0.5 mrad <sub>max.</sub>	0.5 mrad <sub>max.</sub>
Beam deviation	15 mrad <sub>max.</sub>	15 mrad <sub>max.</sub>	15 mrad <sub>max.</sub>	15 mrad <sub>max.</sub>
Laser protection class	2 @ max. P <sub>opt</sub>	3R @ max. P <sub>opt</sub>	2 @ max. P <sub>opt</sub>	1 @ max. P <sub>opt</sub>
Operating voltage Vcc	5 V DC	5 V DC	5 V DC	5 V DC
Operating temperature	0 °C to 50 °C	0 °C to 50 °C	0 °C to 65 °C	0 °C to 60 °C
Storage temperature	0 °C to 65 °C	0 °C to 65 °C	0 °C to 65 °C	0 °C to 65 °C
Lens type	Aspherical polymer lens			
Casing	Aluminium black anodized			
Beam setting	Collimated			

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
Note: The above product specifications are subject to change without notice.

**Collimated**

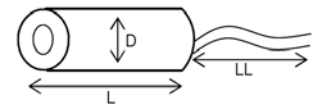


- Applications:**
- Positioning
  - Light barriers
  - Construction laser applications

- Features:**
- Small dimension
  - low operating voltage

D (mm)	10
L (mm)	20
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1020-	635-1-E-K	635-5-E-K	650-1-E-K	650-5-E-K
Order number	1206000017	1206000018	1206000019	1206000020
Wavelength	635 nm	635 nm	655 nm	655 nm
Optical output power	< 1 mW	< 5 mW	< 1 mW	< 5 mW
Beam diameter @ 1/e <sup>2</sup>	3.4 x 0.8 mm	3.4 x 0.8 mm	3.4 x 0.8 mm	3.4 x 0.8 mm
Operating current	45 mA max.	70 mA max.	45 mA max.	45 mA max.
Beam divergence	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.
Beam deviation	25 mrad max.	25 mrad max.	25 mrad max.	25 mrad max.
Laser protection class	2	3R	2	3R
Operating voltage Vcc	3 V DC	3 V DC	3 V DC	3 V DC
Operation temperature	5 °C to 50 °C	5 °C to 50 °C	5 °C to 65 °C	5 °C to 65 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C
Lens type	Aspherical polymer lens			
Casing	Aluminium black anodized			
Beam setting	Collimated			

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Special Wavelengths**

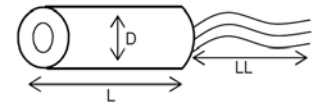
- Applications:**
- Biomedical
  - Spectroscopy
  - Wavelength dependent measurement



- Features:**
- Insulated casing
  - Modulation input<sup>1)</sup>

D (mm)	12
L (mm)	55
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1255H-	405-2,5-R-G	808-50,0-R-G-L	1060-40-R-G	905-8-E-K-L
Order number	1203000049	1203000052	1203000145	1203000182
Wavelength	405 nm	808 nm	1060 nm	905 nm
Optical output power	2.5 mW max.	50 mW max.	40 mW max.	8 mW max.
Beam diameter @ 1/e <sup>2</sup>	Ø1 mm	Ø2 mm	Ø2 mm	3.4 x 0.9 mm
Operating current	80 mA max.	250 mA max.	170 mA max.	65 mA max.
Beam divergence	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.	0.8 mrad max.
Beam deviation	5 mrad max.	5 mrad max.	5 mrad max.	5 mrad max.
Laser protection class	3R	3B @ max. P <sub>opt</sub>	3B	3B @ max. P <sub>opt</sub>
Operating voltage V <sub>cc</sub>	9 V DC	5 V DC	5 V DC	5 V DC
Operation temperature	0 °C to 60 °C	-10 °C to 50 °C	5 °C to 40 °C	5 °C to 65 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 85 °C	-25 °C to 60 °C	-25 °C to 70 °C
Lens type	Aspherical glass lens			Aspher. polymer lens
Casing	Aluminium black anodized			
Beam setting	Collimated			

<sup>1)</sup> optional

**Homogeneous Laser Line**

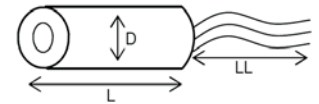
- Applications:**
- Alignment
  - Construction laser applications
  - Biomedical
  - Spectroscopy



- Features:**
- Insulated casing
  - Modulation / Power adjustment via analog input  
Standard: 0 - 25 kHz, Optional up to 300 kHz
  - other wavelength and other fan angles available

D (mm)	12
L (mm)	55
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C			
Modul IMM-1255L-	640-25-45-G-L-homogen	635-5-30-G-L-homogen	650-3,0-5-K-L homogen
Order number	1203000220	1203000154	1203000188
Wavelength	640 nm	640 nm	655 nm
Optical output power	27 mW max.	5 mW max.	3 mW max.
Line length @1 m	0.8 m	0.5 m	85 mm
Line breadth @ 1m	1mm @ 1/e <sup>2</sup>	1 mm @ 1/e <sup>2</sup>	1.5 mm @ 1/e <sup>2</sup>
Aperture angle of the line	45°	30°	5°
Operating current	120 mA max.	70 mA max.	48 mA max.
Intensity distribution	± 20 %	± 20 %	± 10 %
Laser protection class	3B @ max. P <sub>opt</sub>	3B @ max. P <sub>opt</sub>	3R @ max. P <sub>opt</sub>
Operating voltage Vcc	5 V DC	5 V DC	5 V DC
Operating temperature	0 °C to 50 °C	0 °C to 50 °C	5 °C to 60 °C
Storage Temperature	-10 °C to 70 °C	-10 °C to 70 °C	-25 °C to 70 °C
Lens type	glass	glass	polymer
Casing	Aluminium black anodized		

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Gaussian Laser Line**

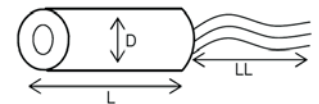


- Applications:**
- Alignment
  - Positioning
  - Construction laser applications
  - Leveling

- Features:**
- Insulated casing
  - Modulation / Power adjustment via analog input  
Standard: 0 - 25 kHz, Optional up to 300 kHz
  - small size

D (mm)	16
L (mm)	18
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C			
Modul IMM-1618L-	785-13-80-K-L	650-19-80-K-L	635-6,5-80-K-L
Order number	1203000077	1203000084	1206000027
Wavelength	785 nm	660 nm	635 nm
Optical output power	13 mW <sub>max.</sub>	19 mW <sub>max.</sub>	6.5 mW <sub>max.</sub>
Line length @ 1 m distance	1.6 m	1.6 m	1.6 m
Line breadth @ 1m distance	1 mm	1 mm	1 mm
Aperture angle of the line	80°	80°	80°
Operating current	150 mA <sub>max.</sub>	105 mA <sub>max.</sub>	75 mA <sub>max.</sub>
Laser protection class	3B @ max. P <sub>opt</sub>	3B @ max. P <sub>opt</sub>	2M @ max. P <sub>opt</sub>
Operating voltage Vcc	5 V DC	5 V DC	5 V DC
Operating temperature	5 °C to 60 °C	5 °C to 50 °C	5 °C to 50 °C
Storage Temperature	-25 °C to 70 °C	-15 °C to 70 °C	-25 °C to 70 °C
Lens type	Polymer	Polymer	Polymer
Casing	Aluminium natural colour		

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Gaussian Laser Line**

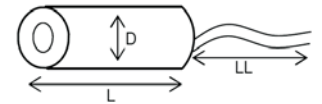
- Applications:**
- Alignment
  - Positioning
  - Construction laser applications
  - Leveling



- Features:**
- Insulated casing
  - Modulation / Power adjustment via analog input  
Standard: 0 - 25 kHz, Optional up to 300 kHz

D (mm)	12
L (mm)	55
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C			
Modul IMM-1255L-	635-1,0-100-K	635-7,0-100-K-L	905-1-100-K
Order number	1206000025	1206000026	1203000134
Wavelength	635 nm	635 nm	905 nm
Optical output power	1 mW <sub>max.</sub>	7 mW <sub>max.</sub>	1 mW <sub>max.</sub>
Line width @ 1 m distance	1 mm	1 mm	1 mm
Line length @ 1 m distance	2.3 m	2.3 m	2.3 m
Operating current	50 mA <sub>max.</sub>	75 mA <sub>max.</sub>	65 mA <sub>max.</sub>
Apertur angle of the line	100°	100°	100°
Laser protection class	2	2M @ max. P <sub>opt</sub>	1
Operating voltage Vcc	5 V DC	5 V DC	5 V DC
Operating temperature	5 °C to 50 °C	5 °C to 50 °C	5 °C to 65 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C
Lens type	Aspherical polymer lens		
Casing	Aluminium black anodized		

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Laser Crosshair Module**

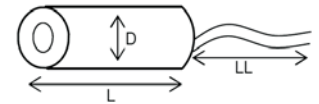
**Applications:** - Industrial alignment  
 - Positioning  
 - Light barriers

**Features:** - Casing insulated



D (mm)	10
L (mm)	20
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Modul IMM-1020K-	-F-650-1-K-15°	-F-650-1-K-25°	-F-650-1-K-4°	-F-650-1-K-45°
Order number	1203000193	1203000233	1203000234	1203000194
Wavelength	650 nm	650 nm	650 nm	650 nm
Operating temperature	5 °C to 60 °C	5 °C to 60 °C	5 °C to 60 °C	5 °C to 60 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C
Angle	15°	25°	4°	45°
Line length @ 25 cm distance	65 mm	110 mm	16 mm	210 mm
Beam diameter @ 25 cm	0.3 mm	0.3 mm	0.3 mm	0.3 mm
Optical output power	< 1 mW <sub>max.</sub>	< 1 mW <sub>max.</sub>	< 1 mW <sub>max.</sub>	< 1 mW <sub>max.</sub>
Operating voltage Vcc	3 V or 5 V DC			
Operating current	80 mA <sub>max.</sub>	80 mA <sub>max.</sub>	80 mA <sub>max.</sub>	80 mA <sub>max.</sub>
Laser protection class	2 @ max. P <sub>opt</sub>	2 @ max. P <sub>opt</sub>	2 @ max. P <sub>opt</sub>	2 @ max. P <sub>opt</sub>
Optic	Polymer			
Casing	Aluminium black anodized			
Beam setting	Focused @ 25 cm			

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

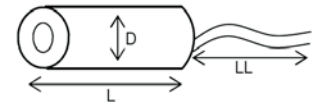
- Applications:**
- Positioning
  - Measurement
  - Target laser

- Features:**
- Low Power
  - Battery operations
  - Small size
  - Single mode VCSEL



D (mm)	8
L (mm)	25
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C		
Modul IMM-0825-	670-0,39-R-G-VCSEL	-850-0,75-R-G-VCSEL
Order number	1203000231	1203000237
Wavelength	670 nm	850 nm
Optical output power	< 0.4 mW	< 0.75 mW
Beam diameter @ 1/e <sup>2</sup>	Ø 1.8 mm	Ø 1.8 mm
Beam setting	Collimated	Collimated
Operating current	14 mA max.	16 mA max.
Beam divergence	0.5 mrad max.	0.5 mrad max.
Beam deviation	7 mrad max.	7 mrad max.
Laser protection class	1	1
Operating voltage Vcc	5 V DC	5 V DC
Operating temperature	0 °C to 40 °C	0 °C to 40 °C
Storage temperature	-25 °C to 85 °C	-25 °C to 85 °C
Lens type	Aspherical glass lens	Aspherical glass lens
Casing	Aluminium black anodized	Aluminium black anodized

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**High power TEC-Module-Series**

- Applications:**
- Industrial alignment
  - High-resolution printing
  - Biomedical instrumentation
  - Spectroscopy
  - Microscopy
  - Genomics



**Dimension:**

L (mm)	115
W (mm)	64
H (mm)	39

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale

Parameter @ Tc=25°C		
Modul IMM-TEC	Casing Type A	Casing Type B
Order Number	On request	On request
Wavelength	375 nm - 1550 nm	375 nm - 1550 nm
Wavelength stability	< 0.01 nm	< 0.01 nm
Operating temperature	-20 °C to 40 °C	-20 °C to 40 °C
Beam profile	Round, elliptical, line or cross and special profiles on request	
Beam diameter @ 1/e <sup>2</sup>	Varies with model	
Beam divergence	0.8 mrad, varies with model	0.8 mrad, varies with model
Beam deviation	< 3 mrad, varies with model	< 3 mrad, varies with model
Optical output power	Up to 500 mW, varies with model	Up to 200mW, varies with model
Operating voltage Vcc	4.5 V to 24 V DC	4.5 V to 24 V DC
Operating current	max. 5 A	max. 2 A
Power stability	< 1%	< 1%
Modulation (TTL input)	Up to 500 MHz	Up to 500 MHz

The TEC-Module offers exceptional wavelength and power stability, (better than 1%), good pointing accuracy and significantly increased laser diode lifetime.

The module incorporates temperature control electronics, thermo electric cooler and heat sink that enables the laser diode temperature to be controlled to a set point temperature between 15°C to 35°C (adjustable) and with a stability of ±0,05°C.

If you need a wavelength or power that we do not offer as standard, please contact our sales team to discuss your requirements.

**High power TEC-Module-Series**

**Type A**



**Dimension:**

L (mm)	115
W (mm)	64
H (mm)	39

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale

Optional with external laser head



**Dimension:**

L (mm)	57,5 +0,8/-0,3
Ø (mm)	25 h8

Dimensions according to DIN ISO 2768 m if not specified otherwise. Drawing not in scale

Optional with fiber coupling



**Type B**



**Dimension:**

L (mm)	160
Ø (mm)	38

Dimensions according to DIN ISO 2768 m if not specified otherwise. Drawing not in scale

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)

Note: The above product specifications are subject to change without notice.

**Biophotonics - Series**

**Application:** - Biophotonics



**Dimension:**

L (mm)	115
W (mm)	64
H (mm)	39

Optional with external laser head

L (mm)	57,5 +0,8/-0,3
Ø (mm)	25 h8

Dimensions according to DIN ISO 2768 m if not specified otherwise. Drawing not in scale

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale

Parameter @ Tc=25°C					
Modul IMM-TEC			Casing Type A		
Order Number			On request		
Wavelength	375 nm	375 nm	395 nm	405 nm	405 nm
Optical output power (max.)	20 mW / SM	200 mW / MM	120 mW / SM	120 mW / SM	600 mW / MM
Wavelength	415 nm	425 nm	445 nm	445 nm	460 nm
Optical output power (max.)	120 mW / SM	120 mW / SM	100 mW / SM	1.6 W / MM	100 mW / SM
Wavelength	473 nm	488 nm	515 nm		
Optical output power (max.)	80 mW / SM	150 mW / SM	25 mW / SM		
Operating temperature	0 °C to 40 °C				
Beam profile	Round, elliptical, line or cross and special profiles on request				
Beam diameter @ 1/e <sup>2</sup>	Varies with model				
Beam divergence	0.8 mrad, varies with model				
Beam deviation	< 3 mrad, varies with model				
Wavelength stability	< 0.01 nm				
Operating voltage Vcc	9 V to 24 V DC				
Operating current	max. 1 A				
Power stability	< 1%				

SM = Singlemode, MM = Multimode

The TEC-Module offers exceptional wavelength and power stability, (better than 1%), good pointing accuracy and significantly increased laser diode lifetime.

The module incorporates temperature control electronics, thermo electric cooler and heat sink that enables the laser diode temperature to be controlled to a set point temperature between 15°C to 35°C (adjustable) and with a stability of ±0.05°C.

If you need a wavelength or power that we do not offer as standard, please contact our sales team to discuss your requirements.

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)

Note: The above product specifications are subject to change without notice.

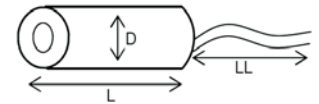


- Applications:**
- Positioning
  - Measurement
  - Target laser
  - Laboratory tests
  - medical diagnosis

- Features:**
- green
  - high intensity with a low, radiating, optical benefits

D (mm)	10
L (mm)	55
LL (mm)	150 ± 20

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C		
Modul IMM-1055-	532-1-R	532-4-R Grade B
Order number	1203000202	1203000226
Wavelength	532 nm	532 nm
Optical output power	0.7 mW	4 mW
Beam diameter @ 1/e <sup>2</sup>	Ø 2 mm	Ø 2 mm
Beam setting	Collimated	Collimated
Operating current	360 mA <sub>max.</sub>	360 mA <sub>max.</sub>
Beam divergence	0.5 mrad	0.5 mrad
Beam deviation	2 mrad	2 mrad
Laser protection class	2	3R
Operating voltage	5 V DC	5 V DC
Operating temperature	20 °C to 30 °C	10 °C to 40 °C
Storage temperature	-40 °C to 85 °C	-40 °C to 85 °C
Lens type	glass	glass
Casing	Aluminium black anodized	Aluminium black anodized

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

**Laser Diode Module with External Thread for Industrial Use**

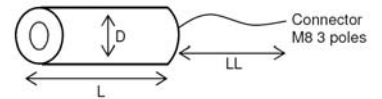


- Applications:**
- Industrial alignment
  - Positioning
  - Light barriers
  - Metrology

- Features:**
- Laser Diode Module with External Thread for Industrial Use
  - optional Protection class IP67

D (mm)	M18x1
L (mm)	76
LL (mm)	1000±100

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



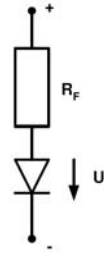
Parameter @ Tc=25°C		
Modul IMM-	M18x1/76-650-1-E-G-12V	M18x1/76-650-1-E-G-D-24V
Order number	1203000212	1203000229
Wavelength	655 nm	655 nm
Optical output power	0.99 mW <sub>max.</sub>	0.99 mW <sub>max.</sub>
Beam diameter @ 1/e <sup>2</sup>	3 mm x 1.8 mm	3 mm x 1.8 mm
Operating current	50 mA <sub>max.</sub>	50 mA <sub>max.</sub>
Beam divergence	0.5 mrad <sub>max.</sub>	0.5 mrad <sub>max.</sub>
Beam deviation	15 mrad <sub>max.</sub>	15 mrad <sub>max.</sub>
Laser protection class	2	2
Operating voltage Vcc	12 V	24 V
Operation temperature	-10 °C to 70 °C	-10 °C to 70 °C
Storage temperature	-25 °C to 85 °C	-25 °C to 85 °C
Lens type	glass	glass
Casing	metal	metal, IP67
Beam setting	collimated	collimated

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.



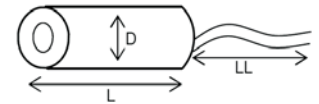
- Applications:**
- Construction laser applications
  - Positioning
  - Light barriers
  - Leveling

- Features:**
- Focus ist adjustable by screwing the threaded ring



D (mm)	11
L (mm)	15
LL (mm)	150 ± 20

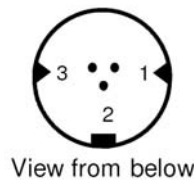
Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



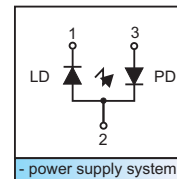
Parameter @ Tc=25°C			
LED Collimator LED-1115-ELC-	595-29-5	645-29-2	875-19-5
Order number	1103000022	1103000023	1103000065
Wavelength	595 nm	645 nm	875 nm
Optical output power	100 µW @ 20 mA	2 µW @ 5 mA	300 µW @ 20 mA
Spectral bandwidth @ 50 %	24 nm	25 nm	35 nm
Beam diameter @ 0.5 m	Ø 18 mm	Ø 8 mm	Ø 18 mm
Operating current I <sub>F</sub>	20 mA <sub>max.</sub>	5 mA	20 mA
Forward voltage (U <sub>F</sub> @ I <sub>F</sub> )	2.2 V	2.0 V	1.35 V
Laser protection class	1	1	1
Beam setting	Variable	Variable	Variable
Operating temperature	5 °C to 40 °C	5 °C to 40 °C	5 °C to 40 °C
Storage temperature	-10 °C to 60 °C	-10 °C to 60 °C	-10 °C to 60 °C
Lens type	Aspherical polymer lens		
Casing	Aluminium black anodized		

Compliant with RoHS-requirements (2002/95/EG vom 27.01.2003)  
 Note: The above product specifications are subject to change without notice.

- Applications:**
- Construction laser applications
  - Positioning
  - Light barriers
  - Leveling

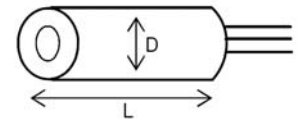


### PINOUT



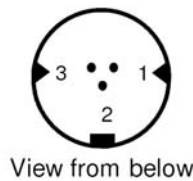
D (mm)	7
L (mm)	14

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale

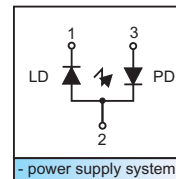


Parameter @ Tc=25°C				
Collimator IMK-0714-	R-K-U-LD-650571A	E-K-U-LD-630551A	E-K-U-LD-653051A	E-G-QL85D6SA
Order number	1103000108	1103000115	1103000109	1103000093
Wavelength	655 nm	635 nm	655 nm	850 nm
Optical power	2.8 mW max.	4.6 mW max.	20 mW max.	3.5 mW max.
Beam diameter @ 1/e <sup>2</sup>	Ø 2 mm	3.8 x 1.8 mm	3.8 x 1.8 mm	4.6 x 1.8 mm
Operating current	40 mA max.	40 mA max.	95 mA max.	30 mA max.
Threshold current	24 mA	20 mA	60 mA	10 mA
Beam divergence	0.5 mrad max.	0.5 mrad max.	0.5 mrad max.	0.5 mrad max.
Beam deviation	15 mrad max.	15 mrad max.	15 mrad max.	15 mrad max.
Laser protection class	3B	3B	3B	3B
Operating voltage	2.1 V	2.2 V	2.1 V	1.9 V
Monitor diode current	0.2 mA	0.2 mA	0.2 mA	0.2 mA
Operating temperature	0 °C to 65 °C	0 °C to 50 °C	0 °C to 50 °C	-10 °C to 60 °C
Storage temperature	0 °C to 65 °C	0 °C to 65 °C	0 °C to 65 °C	-25 °C to 85 °C
Suitable laser diode controllers	IMS-WKL1-O1, IMS-5/250J-1			
Lens type	Aspherical polymer lens			Glass
Casing	Aluminium natural colour			

- Applications:**
- Construction laser applications
  - Positioning
  - Light barriers
  - Leveling

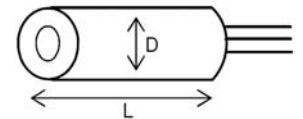


### PINOUT



D (mm)	4.2 - 7
L (mm)	8 - 22

Dimensions according to DIN ISO 2768 f if not specified otherwise. Drawing not in scale



Parameter @ Tc=25°C				
Collimator IMK-	0508-E-K-ADL-65075SL	0710-E-K-U-LD-650571A	0722-R-K-U-LD-650571A	0408-E-G-ADL-65075SL
Order number	1103000116	1103000110	1103000107	1103000082
Wavelength	655 nm	655 nm	655 nm	655 nm
Optical power	8 mW <sub>max.</sub>	6 mW <sub>max.</sub>	2.1 mW <sub>max.</sub>	5 mW <sub>max.</sub>
Beam diameter @ 1/e <sup>2</sup>	2.5 x 0.6 mm	3.4 x 0.8 mm	∅ 3.6 mm	1 x 0.7 mm
Operating current	35 mA <sub>max.</sub>	40 mA <sub>max.</sub>	40 mA <sub>max.</sub>	35 mA <sub>max.</sub>
Threshold current	20 mA	24 mA	24 mA	20 mA
Beam divergence	1.5 mrad <sub>max.</sub>	0.8 mrad <sub>max.</sub>	0.3 mrad <sub>max.</sub>	1.5 mrad <sub>max.</sub>
Beam deviation	30 mrad <sub>max.</sub>	25 mrad <sub>max.</sub>	5 mrad <sub>max.</sub>	30 mrad <sub>max.</sub>
Laser protection class	3B	3B	3B	3B
Operating voltage	2.2 V	2.1 V	2.1 V	2.2 V
Monitor diode current	0.2 mA	0.2 mA	0.2 mA	0.2 mA
Operating temperature	5 °C to 65 °C	5 °C to 65 °C	-10 °C to 70 °C	-10 °C to 70 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 85 °C	-25 °C to 85 °C
Casing diameter	5 mm	7 mm	7 mm	4.2 mm
Casing length	8 mm	10 mm	22 mm	8 mm
Suitable laser diode controllers	IMS-WKL1-01, IMS-5/250J-1			
Lens type	aspherical polymer lens			Glass
Casing	Aluminium natural colour			

## Custom designed Laser Diode Modules and Collimators

Additional to the standard program IMM offers on request custom designed solutions.

An inquiry form you will find on our website [www.imm-photonics.de](http://www.imm-photonics.de) under:

**products -> laser diode collimators -> specification form**  
**laser diode modules -> specification form**

### Features

- Wave length: 370 nm - 1550 nm
- Power: 0.1 mW - 500 mW
- Operating voltage Vcc: 3 V - 36 V
- Collimated
- Focused
- Line
- Cross Line
- Point
- Adjustable focus
- Individuale housing
- Heavy duty

### Examples



Please copy, fill in and **FAX to +49 89 321 412 11** or send to us.  
 Also an inquiry form you will find on our website **www.imm-photronics.de**.  
 Please write in **block letters**.

Company information	
Company	
Street	
Zip-Code / City	
Country	
Phone	
Fax	
E-mail	
Contact person	

All beam diameters @ FW 1/e<sup>2</sup>

Collimator <input type="checkbox"/> Module <input type="checkbox"/>	
Wavelength	_____ nm +/- _____ nm
Optical output power	_____ mW +/- _____ mW
Mechanical dimension	Ø _____ mm Length _____ mm
Beam deviation	_____ mrad max.
Beam divergence	_____ mrad max.
Operating voltage	_____ V
Operating temperature	_____ °C min. _____ °C max.
Storage temperature	_____ °C min. _____ °C max.
Beam profile	Round <input type="checkbox"/> Elliptical <input type="checkbox"/> Line <input type="checkbox"/> Crosshair <input type="checkbox"/> Other <input type="checkbox"/>
Collimated round <input type="checkbox"/>	Beam width _____ mm @ exit _____ mm @ distance _____ m
Collimated elliptical <input type="checkbox"/>	Beam width _____ x _____ mm <sup>2</sup> @ exit _____ x _____ mm <sup>2</sup> @ distance _____ m
Focused <input type="checkbox"/>	Distance _____ Ø _____
Line/Crosshair	Gaussian <input type="checkbox"/> Homogeneous <input type="checkbox"/> Fan angle _____
Modulated	Yes <input type="checkbox"/> No <input type="checkbox"/> Frequency _____ kHz
Casing	Isolated <input type="checkbox"/> Anodized <input type="checkbox"/> Not relevant <input type="checkbox"/>
Cooled	Yes <input type="checkbox"/> No <input type="checkbox"/> Stabilisation _____
Lens type	Glass <input type="checkbox"/> Polymer <input type="checkbox"/>
Stranded wire <input type="checkbox"/> Cable <input type="checkbox"/>	Length _____ mm
Electrical connector	None <input type="checkbox"/> Type _____

Notice (additional information)

**If you have an own specification. Do not hesitate to fax us.**

**IMM Photonics GmbH** hat sich kontinuierlich zum Hersteller, Distributor und Dienstleister entwickelt. Heute sind wir mit über 40 Mitarbeitern einer der führenden Anbieter im Bereich Lasertechnik, Optoelektronik und Faseroptik mit eigener Entwicklung und Produktion.

Unser Produktangebot reicht von der einzelnen Komponente (Laserdiode, Optik, Optoelektronik) über Subsysteme (Kollimatoren und Module) bis hin zu kompletten Geräten wie z.B. den FIBERPOINT®. Bei der Entwicklung kundenspezifischer Lösungen greifen wir auf fast 150 Ingenieurjahre Erfahrung zurück, welche auch unser hohes technisches Know-how und die Qualität unserer Produkte prägen.

## Unsere Firmenphilosophie

Unser Ziel ist - gemeinsam mit Ihnen - maßgeschneiderte Lösungen für Sie zu erarbeiten.

**IMM Photonics GmbH** has been continuously developed to supplier, distributor and service company. With more than 40 employees we are one of the leading supplier in laser technique, optoelectronics and fiber optics with own development and production department.

Our product range includes single components (laser diodes, optics, optoelectronics), sub-systems (collimators and modules) and complete devices, such as FIBERPOINT®. With regard to customer specific solutions, we have got nearly 150 years of experience in engineering; our technical know-how is reflected in the high quality of our products.

## Company Philosophy

Our aim is to find specific solutions together with you – for you.

### IMM Photonics GmbH

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