IMM photonics

DOE LASERS

Illustrative representation

These laser modules are available in both plastic and glass optics.
They are available in both CW mode and modulated.

DOE LASER RED

GENERAL	VALUE	NOTE
Wavelength	660 nm (Δλ max. 10 nm)	Additional on request
Output power (max.)	85 mW	Additional on request
Beam adjustment	Focus distance: 300 mm	Collimated beam & other focus distances on request
Fan angle	60° ± 3 % @ 660 nm	On request
Line width (1/e²) (focussed @300 mm)	0.2 mm ± 0.1 mm	Depending on laser diode
Operation temperature	0°C to +60°C	Others on request
System storage temperature range	-40°C to +70°C	

ELECTRONICS	VALUE	NOTE
Supply voltage	5 V to 36 V	
Operating current	300 mA max. (@5 V)	
Modulation digital	Digital (5 V), max. 500 kHz	
Modulation analog		On request
ESD Rating	±8 kV contact discharge	61000-4-2 (Level 4)
Protection circuit	Reverse polarity protection, surge protection	
Cable	4 wires (AWG22), grey, Ø = 4.9 mm	Suitable for drag chains „Supertronic PURö“
Cable length / Connection	2 m (Standard), open end with stripped and tinned wires	Customized connector on request

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DOE LASER RED

PRODUCT VARIANTS

No.	1	2	3	4	5	6
Pattern						
Description	Single homogeneous line	Cross	5 parallel lines	5 concentric rings	Viewfinder	17 x 17 dot matrix
Wavelength [nm]	660	660	660	660	660	660
Typ. power [mW] (@exit aperture)	85	60	55	55	55	55
Fan angle [°]	60 ± 3 %	37	30.2	2.8	37.7 x 27.9	15.2
Beam adjustment	focussed	focussed	focussed	focussed	focussed	focussed
Focus distance [mm]	300	300	300	300	300	300
Line width (1/e²) (@Focus) [mm]	0.2 ± 0.1	not applicable	not applicable	not applicable	not applicable	not applicable
Operation modulation	cw / digital	cw / digital	cw / digital	cw / digital	cw / digital	cw / digital
Cable length [m]	2	2	2	2	2	2

All specifications @ T=25°C

FEATURES

- **Patterns (Fan angles see table):**
  - Cross
  - Parallel lines
  - Concentric rings
  - Dot matrix
  - Viewfinder
  - More on request
- **Homogeneous laser line:**
  - Homogeneity: ≤ 30 %
  - Fan angle: 60° (more on request)
- **Fixed focus**
- **Compact design for integration into larger systems**
- **Isolated module:** level 4
- **Operation mode:**
  - Continuous operation (cw)
  - Digital modulation (analog modulation optional)
- **Input voltage:** 5 - 36 V
- **Suitable for industrial use:**
  - Robust design for harsh environments
  - Cable suitable for drag chains

APPLICATIONS

- Machine vision
- Measuring systems

OPTIONS

- X=0 Polymere optics
- X=1 Glass optics
- Y=0 no modulation
- Y=1 Modulation as spezified

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DOE LASER GREEN

GENERAL	VALUE	NOTE
Wavelength	520 nm (**Δλ** max. 10 nm)	Additional on request
Output power (max.)	80 mW	Additional on request
Beam adjustment	Focus distance: 300 mm	Collimated beam & other focus distances on request
Fan angle	60° ± 3 % @ 660 nm	
Line width (1/e²) (focussed @300 mm)	0.2 mm ± 0.1 mm	
Operation temperature	0°C to +60°C	
System storage temperature range	-40°C to +70°C	

ELECTRONICS	VALUE	NOTE
Supply voltage	9 V - 36 V (520 nm)	
Operating current	300 mA max. (@5 V)	
Modulation digital	Digital (5 V), max. 500 kHz	
Modulation analog		On request
ESD Rating	±8 kV contact discharge	61000-4-2 (Level 4)
Protection circuit	Reverse polarity protection, surge protection	
Cable	4 wires (AWG22), grey, Ø = 4.9 mm	Suitable for drag chains „Supertronic PURö“
Cable length / Connection	2 m (Standard), open end with stripped and tinned wires	Customized connector on request

MECHANICS	VALUE	NOTE
Module length	65 mm	
Diameter	12 mm	
Material	Aluminium, black anodized	

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DOE LASER GREEN

PRODUCT VARIANTS

NO.	1
Pattern	
Description	Single homogeneous line
Wavelength [nm]	520
Typ. power [mW] (@exit aperture)	80
Beam adjustment	focussed
Focus distance [mm]	300
Line width (1/e²) (@Focus) [mm]	0.2 ± 0.1
Operation modulation	cw / digital
Cable length [m]	2

All specifications @ T=25°C

FEATURES

- **Patterns (Fan angles see table):**
  - Cross
  - More on request
- **Homogeneous laser line:**
  - Homogeneity: ≤ 30 %
  - Fan angle: 60° (more on request)
- **Fixed focus**
- **Compact design for integration into larger systems**
- **Isolated module:** level 4
- **Operation mode:**
  - Continuous operation (cw)
  - Digital modulation (analog modulation optional)
- **Input voltage:** 5 - 36 V
- **Suitable for industrial use:**
  - Robust design for harsh environments
  - Cable suitable for drag chains

APPLICATIONS

- Machine vision
- Measuring systems

OPTIONS

- X=0 Polymere optics
- X=1 Glass optics
- Y=0 no modulation
- Y=1 Modulation as spezified

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DOE LASER BLUE

GENERAL	VALUE	NOTE
Wavelength	405 nm, 450 nm, (**Δλ** max. 10 nm)	Additional on request
Output power (max.)	80 mW (405 nm), 50 mW (450 nm)	Additional on request
Beam adjustment	Focus distance: 300 mm	Collimated beam & other focus distances on request
Fan angle	60° ± 3 % @ 660 nm	
Line width (1/e²) (focussed @300 mm)	0.2 mm ± 0.1 mm	
Operation temperature	0°C to +60°C	
System storage temperature range	-40°C to +70°C	

ELECTRONICS	VALUE	NOTE
Supply voltage	9 V - 36 V (405/450 nm)	
Operating current	300 mA max. (@5 V)	
Modulation digital	Digital (5 V), max. 500 kHz	
Modulation analog		On request
ESD Rating	±8 kV contact discharge	61000-4-2 (Level 4)
Protection circuit	Reverse polarity protection, surge protection	
Cable	4 wires (AWG22), grey, Ø = 4.9 mm	Suitable for drag chains „Supertronic PURö“
Cable length / Connection	2 m (Standard), open end with stripped and tinned wires	Customized connector on request

MECHANICS	VALUE	NOTE
Module length	65 mm	
Diameter	12 mm	
Material	Aluminium, black anodized	

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DOE LASER BLUE

PRODUCT VARIANTS

NO.	1
Pattern	
Description	Single homogeneous line
Wavelength [nm]	405, 450
Typ. power [mW] (@exit aperture)	85 (405 nm) 50 (450 nm)
Beam adjustment	focussed
Focus distance [mm]	300
Line width (1/e²) (@Focus) [mm]	0.2 ± 0.1
Operation modulation	cw / digital
Cable length [m]	2

All specifications @ T=25°C

APPLICATIONS

- Machine vision
- Measuring systems

OPTIONS

- X=0 Polymere optics
- X=1 Glass optics
- Y=0 no modulation
- Y=1 Modulation as spezified

FEATURES

- **Patterns (Fan angles see table):**
  - Single homogeneous line
  - More on request

  Homogeneous laser line:
- - Homogeneity: ≤ 30 %
  - Fan angle: 60° (more on request)

  Fixed focus
- **Compact design for integration into**
- **larger systems**

  Isolated module: level 4
- **Operation mode:**
  - Continuous operation (cw)
  - Digital modulation (analog modulation optional)

  Input voltage: 5 - 36 V
- **Suitable for industrial use:**
- - Robust design for harsh environments
  - Cable suitable for drag chains

Subject to technical modifications. As per October 2024.

WE LOOK FORWARD
to solving your challenge

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