

High Power Fiber Coupled Diode Laser

ND Series



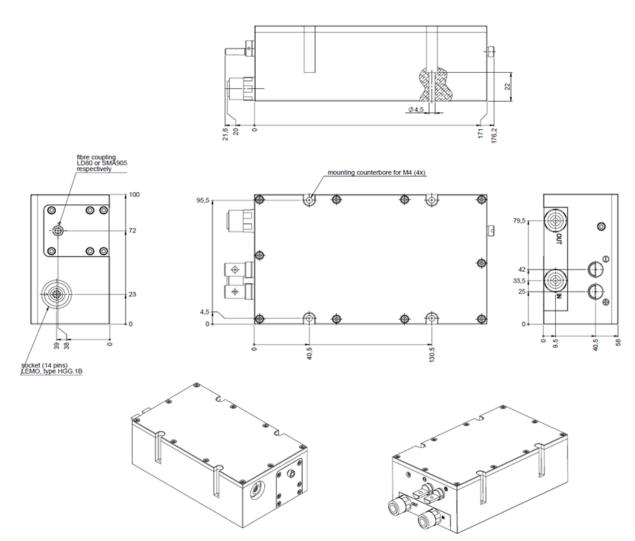
Features

- High brightness
- High E/O efficiency
- Compact housing
- Hermetically sealed housing
- Water Cooling
- · Plug and play fiber connector

Applications

- · Advanced Manufacturing
- Health
- · Information Technology
- Scientific Research

Product Dimensions (mm)



Remark: The structure drawing is for reference only. Please feel free to contact us for any special requirements.



Product Specifications

Part No.¹¹ FL-ND216¹- 120-980-200 FL-ND301¹- 120-880-200 FL-ND301²- 120-880-200 FL-ND300²- 120-880-200 FL-ND300²- 120-880-200 FL-ND300²- 120-880-200 PC-ND2160 PC-ND20 PC-ND300²- 120-880-200 PC-ND200²- 120-880-200-880-200 PC-ND200²- 120-880-200-880-200						
Part No.	Product Code		FCS000024	FCS000027	FCS000025	FCS000026
120-980-200 150-980-400 120-808-200 120-808-400	Part No. 1		FL-ND2161-	FL-ND3011-	FL-ND3002-	FL-ND3003-
CW-nominal output power W 120 150 120 120 Centroid wavelength nm 980 980 808 808 Wavelength Clerance (e) nm 10 10 10 10 Spectral width (FWHM) nm 20 20 20 20 Wavelength Temp. drift nm²C - 0.34 - 0.34 - 0.28 - 0.28 Wavelength stabilization / / 0.7 / / / / Operation Conditions Nominal dlode heat sink Temp. °C 25	raitino.		120-980-200	150-980-400	120-808-200	120-808-400
Centroid wavelength nm 980 808 808 Wavelength tolerance (±) nm 10 10 10 10 Spectral width (FWHM) nm 20 20 20 Wavelength Temp. drift nm/°C - 0.34 - 0.34 - 0.28 - 0.28 Wavelength Temp. drift nm/°C - 0.34 - 0.34 - 0.34 - 0.28 Wavelength Temp. drift nm/°C - 0.34 - 0.34 - 0.34 - 0.28 Wavelength Stabilization r r 0.25 25	Optical Data	Unit	Value	Value	Value	Value
Wavelength tolerance (±) nm 10 10 10 10 Spectral width (FWHM) nm 20 20 20 20 Wavelength Pemp. drift nm/°C ~ 0.34 ~ 0.34 ~ 0.28 ~ 0.28 Wavelength stabilization " 0.72 " 0.74 " 0.74 " 0.72 2.0 Operation Conditions Nominal dlode heat sink flemp. " 0.72 " 0.75 2.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 <td>CW-nominal output power</td> <td>W</td> <td>120</td> <td>150</td> <td>120</td> <td>120</td>	CW-nominal output power	W	120	150	120	120
Spectral width (FWHM) nm 20 20 20 20 Wavelength Temp. drift nm/°C ~ 0.34 ~ 0.34 ~ 0.34 ~ 0.28 ~ 0.28 Wavelength stabilization / 0 / 1 / 0 / 1 / 0 Operation Conditions Nominal diode heat sink Temp. °C 25	Centroid wavelength	nm	980	980	808	808
Wavelength Temp. drift nm/°C ~ 0.34 ~ 0.34 ~ 0.34 ~ 0.28 ~ 0.28 Wavelength stabilization / / / / / / / / Operation Conditions Nominal diode heat sink Temp. °C 25	Wavelength tolerance (±)	nm	10	10	10	10
Operation Conditions /	Spectral width (FWHM)	nm	20	20	20	20
Operation Conditions Nominal clidde heat sink Temp. °C 25 30 30 300 <t< td=""><td>Wavelength Temp. drift</td><td>nm/°C</td><td>~ 0.34</td><td>~ 0.34</td><td>~ 0.28</td><td>~ 0.28</td></t<>	Wavelength Temp. drift	nm/°C	~ 0.34	~ 0.34	~ 0.28	~ 0.28
Nominal diode heat sink Temp. °C 25 25 25 25 Diode heat sink operation Temp.² °C +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 +15 - +30 300 400 400 400 400 400 400 400 400 400 400 400 400 300<	Wavelength stabilization		1	1	1	1
Diode heat sink operation Temp. ²	Operation Conditions					
Minimum heat sink capacity W 300 340 300 300 Chiller flow capacity L/min 5 5 5 5 Water pressure bar 4 4 4 4 4 Electrical Data *** State of life A 65 75 65 65 Max. operation current start of life A 78 90 78 78 Typical threshold current A 8 8 8 8 8 Typical peration voltage V 6 6 6 6 6 6 Typical E/O efficiency % 39 40 37 33	Nominal diode heat sink Temp.	°C	25	25	25	25
Chiller flow capacity Water pressure L/min bar 5 5 5 Water pressure bar 4 4 4 4 Electrical Data Wax. operation current start of life A 655 75 65 65 Max. operation current end of life A 78 90 78 78 78 78 78 78 78 79 78 79 78 78 78 78 78 78 78 78 78 78 78 78 78	Diode heat sink operation Temp. ²	°C	+15 +30	+15 +30	+15 +30	+15 +30
Max. operation current start of life	Minimum heat sink capacity	W	300	340	300	300
Max. operation current start of life A 65 75 65 65	Chiller flow capacity	L/min	5	5	5	5
Max. operation current start of life A 65 75 65 65 Max. operation current end of life A 78 90 78 78 Typical threshold current A 8 8 8 8 Typical operation voltage V 6 6 6 6 6 Typical stope W/A 2.4 2.4 2.3 2.3 2.3 Typical E/O efficiency % 39 40 37 39 Fiber connection Fiber connection V 1 /	Water pressure	bar	4	4	4	4
Max. operation current end of life A 78 90 78 78 Typical threshold current A 8 8 8 8 8 Typical slope W/A 2.4 2.4 2.3 2.3 Typical slope W/A 2.4 2.4 2.3 2.3 Typical E/O efficiency % 39 40 37 39 Fiber connection Fiber core diameter µm 200 400 200 400 Numerical aperture 0.22 0.22 0.22 0.22 0.22 Fiber optic connector SMA905 LD80 SMA905 SMA905 Package Weight basic package kg 2.2 2.2 2.2 2.2 2.2 Storage Temp. °C -20+60 -20+60 -20+60 -20+60 -20+60 -20+60 -20+60 NTC & Pt100 NTC & Pt100 <t< td=""><td>Electrical Data</td><td></td><td></td><td></td><td></td><td></td></t<>	Electrical Data					
Typical threshold current A 8 8 8 8 Typical operation voltage V 6 6 6 6 Typical slope W/A 2.4 2.4 2.3 2.3 Typical E/O efficiency % 39 40 37 39 Fiber connection Fiber connection Fiber core diameter µm 200 400 200 400 Numerical aperture 0.22	Max. operation current start of life	Α	65	75	65	65
Typical operation voltage V 6 6 6 6 6 6 6 6 6 7 ypical slope W/A 2.4 2.4 2.3 2.3 2.3 7 ypical E/O efficiency % 39 40 37 39 39 40 37 39 39 40 37 39 39 40 37 39 39 40 37 39 39 39 40 37 39 39 39 39 39 39 39 39 39 39 39 39 39	Max. operation current end of life	Α	78	90	78	78
Typical slope W/A 2.4 2.4 2.3 2.3 7ypical E/O efficiency % 39 40 37 37 39 Fiber connection Fiber connection Fiber included	Typical threshold current	Α	8	8	8	8
Fiber connection Fiber connection Fiber cornection γ	Typical operation voltage	V	6	6	6	6
Fiber connection Fiber included /	Typical slope	W/A	2.4	2.4	2.3	2.3
Fiber included / 0 400 400 400 400 / 200 400 400 100 200	Typical E/O efficiency	%	39	40	37	39
Fiber core diameter μm 200 400 200 400 Numerical aperture 0.22 0.22 0.22 0.22 0.22 Fiber optic connector SMA905 LD80 SMA905 SMA905 Package Dimensions mm³ 197.8×100×58	Fiber connection					
Numerical aperture 0.22 </td <td>Fiber included</td> <td></td> <td>1</td> <td>1</td> <td>1</td> <td>1</td>	Fiber included		1	1	1	1
Package Dimensions mm³ 197.8×100×58 <t< td=""><td>Fiber core diameter</td><td>μm</td><td>200</td><td>400</td><td>200</td><td>400</td></t<>	Fiber core diameter	μm	200	400	200	400
Package Dimensions mm³ 197.8×100×58 <	Numerical aperture		0.22	0.22	0.22	0.22
Dimensions mm³ 197.8×100×58	Fiber optic connector		SMA905	LD80	SMA905	SMA905
Weight basic package kg 2.2	Package					
Additional Features NTC & Pt100 NTC & Pt100 </td <td>Dimensions</td> <td>mm³</td> <td>197.8×100×58</td> <td>197.8×100×58</td> <td>197.8×100×58</td> <td>197.8×100×58</td>	Dimensions	mm³	197.8×100×58	197.8×100×58	197.8×100×58	197.8×100×58
Additional Features Temp. sensors NTC & Pt100 NTC & Pt100 NTC & Pt100 NTC & Pt100 Monitor diode (driver: 5V) Output signal: 02.5V Output signal:	Weight basic package	kg	2.2	2.2	2.2	2.2
Temp. sensors NTC & Pt100 NTC	Storage Temp.	°C	-20 +60	-20 +60	-20 +60	-20 +60
Monitor diode (driver: 5V) Pilot beam (driver: 5V, 40mA) Output signal: 02.5V ImW, 635±20nm ImW, 635±20nm Measurement Fiber non AR coated, 200μm non AR coated, 400μm non AR coated, 200μm non AR coated, 400μm	Additional Features					
Pilot beam (driver: 5V, 40mA) 1mW, 635±20nm	-					
Measurement Fiber non AR coated, 200μm non AR coated, 400μm non AR coated, 200μm non AR coated, 400μm	Monitor diode (driver: 5V)		Output signal: 02.5V	Output signal: 02.5V	Output signal: 02.5V	Output signal: 02.5V
Fiber non AR coated, 200μm non AR coated, 400μm non AR coated, 200μm non AR coated, 400μm	Pilot beam (driver: 5V, 40mA)		1mW, 635±20nm	1mW, 635±20nm	1mW, 635±20nm	1mW, 635±20nm
	Measurement					
Diode heat sink Temp °C 25 25 25	Fiber		non AR coated, 200µm	non AR coated, 400µm	non AR coated, 200µm	non AR coated, 400µm
	Diode heat sink Temp	°C	25	25	25	25

¹ Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber Core Diameter.

 $^{^2}$ Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.

