# 405nm 30W Fiber Coupled Laser Diode

K405EMSCN-30.00WN1N-40022

## Features:

- 405nm wavelength
- 30W output power
- 400μm fiber core diameter
- 0.22NA
- Cooling mode: water cooling
- Pluggable output

## Applications:

- Laser Direct Writing
- Biological detection
- 3D Printing

| Specifications (25℃) | | Symbol | Unit | K405EMSCN-30.00WN1N-40022 | | |
|---|---|---|---|---|---|---|
| | | | | Minimum | Typical | Maximum |
| Optical Data(1) | CW Output Power | $P_O$ | W | 30 | - | - |
| | Center Wavelength | $\lambda_c$ | nm | 405±5 | | |
| | Operating Current | $I_{op}$ | A | - | 0.5 | 0.54 |
| | Threshold Current | $I_{th}$ | A | | 0.11 | |
| | Operating Voltage | $V_{op}$ | V | | 60*4(2) | |
| Fiber Data | Core Diameter | $D_{core}$ | μm | - | 400 | - |
| | Cladding Diameter | $D_{clad}$ | μm | - | 440 | - |
| | Numeric Aperture | NA | - | - | 0.22 | - |
| | Fiber Loose Tubing Diameter | - | mm | 6mm stainless steel tube | | |
| | Fiber length | Default 2 meters patchcord provided, other lengths optional | | | | |
| | Fiber Termination | Pluggable SMA905 | | | | |
| Others | Storage Temperature(3) | $T_{st}$ | ℃ | -20 | - | 70 |
| | Lead Soldering Temp | $T_{ls}$ | ℃ | - | - | 260 |
| | Lead Soldering Time | t | sec | - | - | 10 |
| | Operating Case Temperature(4) | $T_{op}$ | ℃ | 15 | - | 35 |
| | Relative Humidity | RH | % | 15 | - | 75 |
| | Cooling Made | water cooling | | | | |
| | Cooling Requirements | The water flow should be at least 2L/min. | | | | |

(1) Data measured under operation output at 30W@25℃.
(2) The laser consists of up to 4 submodules 60V per module. Power can be supplied separately or in series.
(3) A non-condensing environment is required for operation and storage.
(4) Operating temperature defined by the package case. Acceptable operating range is 15℃~35℃, but performance may vary.

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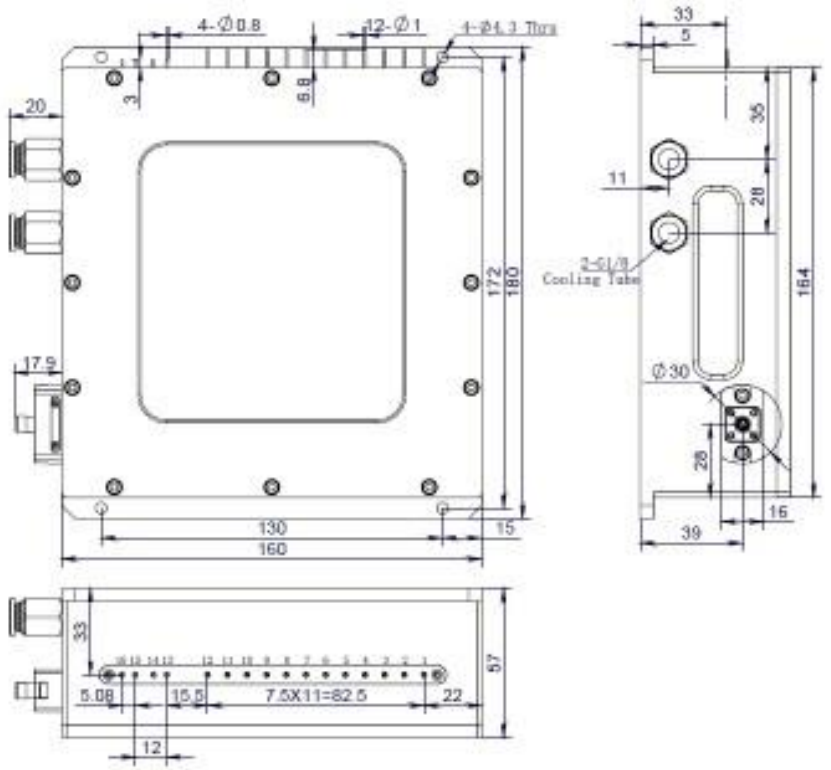
## Package Dimensions (mm)




| Pin | Function |
|---|---|
| 1 | NC |
| 2 | NC |
| 3 | LD1+ |
| 4 | LD1- |
| 5 | LD2+ |
| 6 | LD2- |
| 7 | LD3+ |
| 8 | LD3- |
| 9 | LD4+ |
| 10 | LD4- |
| 11 | NC |
| 12 | NC |
| 13 | Thermistor |
| 14 | Thermistor |
| 15 | NC |
| 16 | NC |

## OPERATING NOTES

- Avoid eye and skin exposure to direct radiation during operation.
- ESD precautions must be taken during storage, transportation and operation.
- Short-circuit is required between pins during storage and transportation.
- Please connect pins to wires by solder instead of using socket when operation current is higher than 6A. Soldering point should be close to the middle of the pins. Soldering temperature should be lower than 260℃ and time shorter than 10 second.
- Make sure the fiber output end is properly cleaned before operation of laser. Follow safety protocols to avoid injury when handling and cutting the fiber.
- Use constant current power supply to avoid surge current during operation.
- Laser diode must be used according to the specifications.
- Laser diode must work with good cooling.
- Operation temperature ranges from 15℃ to 35℃.
- Storage temperature ranges from -20℃ to +70℃.