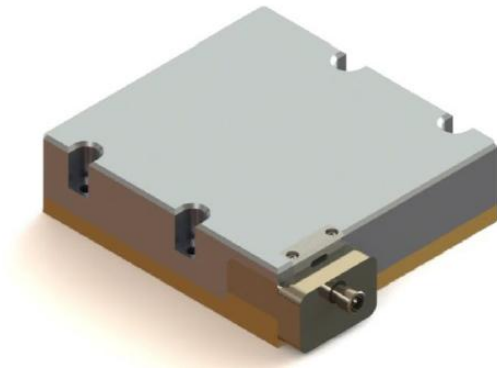


976 nm 300 W Pluggable Fiber Coupled Laser Diode

K976FPACA 300W



Features:

- 976 nm wavelength
- 300 W output power
- 400 μm pluggable output
- 0.22 NA
- 635nm aiming beam

Applications:

- Laser plastic welding
- Laser soldering
- Scientific research
- Fiber laser development

Specifications (25°C)		Symbol	Unit	K976FPACA-300.0W		
				Minimum	Typical	Maximum
Optical Data ⁽¹⁾	CW Output Power	P _O	mW	300	-	-
	Center Wavelength ⁽²⁾	λ _c	nm	976±10		
	Spectral Width (FWHM)	Δλ	nm	-	3	-
	Wavelength Shift with Temperature	Δλ/ΔT	nm/°C	-	0.2	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	50%	-
	Operating Current	I _{op}	A	-	18	19.6
	Threshold Current	I _{th}	A	-	1	-
	Operating Voltage	V _{op}	V	-	32	34
	Slope Efficiency	η	W/A	-	17.6	-
Fiber Data	Core Diameter	D _{core}	μm	-	400	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Loose Tubing Diameter	-	mm	3mm/6mm/8mm		
	Fiber length	Pluggable output, Fiber length is optional				
	Fiber Termination	SMA905/ Customization				
Aiming beam	Output Power	P _a	mW	-	2	-
	Wavelength	λ _a	nm	635±10		
	Operating Voltage	V _a	V	-	2.2	-
	Operating Current	I _a	mA	-	45	65
Others	ESD	V _{esd}	V	-	-	500
	Storage Temperature ⁽²⁾	T _{st}	°C	-20	-	70
	Lead Soldering Temp	T _{ls}	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature ⁽³⁾	T _{op}	°C	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 300W@25°C.

(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15°C~30°C, but performance may vary.

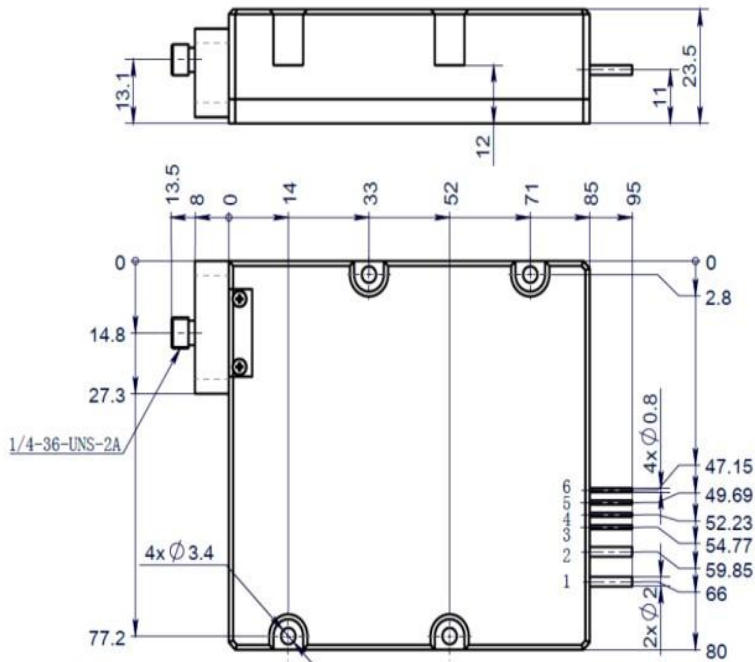
(4) Product delivery qualification standards: $I_{beginning\ of\ life} \leq 19.6A$, $P_{beginning\ of\ life} \geq 300W$.

(5) Within the warranty period, the product is considered qualified with $I_{end\ of\ life} = 19.6A$, $P_{end\ of\ life} \leq 240W$.

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Package Dimensions (mm)



*: Optional functions.

Pin	Function
1	LD (+)
2	LD (-)
3	*aiming beam (+)
4	*aiming beam (-)
5	*Thermistor
6	*Thermistor

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°C 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°C to 35°C.
- Storage temperature ranges from -20°C to +70°C.