

940 nm 10 W Fiber Coupled Laser Diode

K940EB3HN-10.00W



Features:

- 940 nm wavelength
- 10 W output power
- 105 μm fiber core diameter
- 0.22 NA
- 1400nm~1600nm feedback protection

Applications:

- Laser pumping
- CATV
- Lidar

Specifications (25°C)		Symbol	Unit	K940EB3HN-10.00W			Note
				Minimum	Typical	Maximum	
Optical Data ⁽¹⁾	CW Output Power	P _O	W	10	-	-	@12A
	CW Output Power@105°C	P _{O3}	W	2.7	-	-	@6A
	Center Wavelength	λ_c	nm	940±5			
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	3	-	
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.3	-	
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-	
Electrical Data	P _{0.15} /P _{0.22}	NA	%	-	85	-	
	Electrical-to-Optical Efficiency	PE	%	-	52	-	
	Threshold Current	I _{th}	A	-	1.0	-	
	Operating Current	I _{op}	A	-	12	13	
	Operating Voltage	V _{op}	V	-	1.6	1.8	
Fiber Data	Slope Efficiency	η	W/A	-	0.9	-	
	Core Diameter	D _{core}	μm	-	105	-	
	Cladding Diameter	D _{clad}	μm	-	125	-	
	Coating Diameter	D _{buf}	μm	-	250	-	
	Numeric Aperture	NA	-	-	0.22	-	
	Fiber Length	L _f	m	-	0.8	-	
	Fiber	-	-	SI 105/125-22/250			
	Fiber Loose Tubing Diameter	-	mm	-	0.9	-	
	Minimum Bending Radius	-	mm	15	-	-	
Feedback Isolation	Fiber Termination	-	-	N/A			
	Wavelength Range	-	nm	1400~1600			
	Isolation	-	dB	-	30	-	
Others	ESD	V _{esd}	V	-	-	500	
	Storage Temperature ⁽²⁾	T _{st}	°C	-40	-	110	
	Lead Soldering Temp	T _{ls}	°C	-	-	260	
	Lead Soldering Time	t	sec	-	-	10	
	Operating Case Temperature ⁽³⁾	T _{op}	°C	15	-	35	
	Ultimate Operating Case Temperature ⁽⁴⁾	T _{op}	°C	-40	-	105	I _{op} ≤6A;
	Relative Humidity	RH	%	15	-	85	

(1) Data measured under operation output at 10W@25°C.

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

(3) Operating temperature defined by the package case.

(4) Operating temperature has an impact on product performance and reliability.

K940EB3HN-10.00W

Pin	Function
1	LD (+)
2	LD (-)

- 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 -40°C to +110°C.