

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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**1 310 nm InGaAsP MQW-FP LASER DIODE
COAXIAL MODULE WITH MMF FOR OTDR APPLICATION**

DESCRIPTION

The NX7337BJ-AA is a 1 310 nm Multiple Quantum Well (MQW) structured Fabry-Perot (FP) laser diode coaxial module with multi mode fiber. This module is specified to operate under pulsed condition and designed for light source of Optical Time Domain Reflectometer (OTDR).

FEATURES

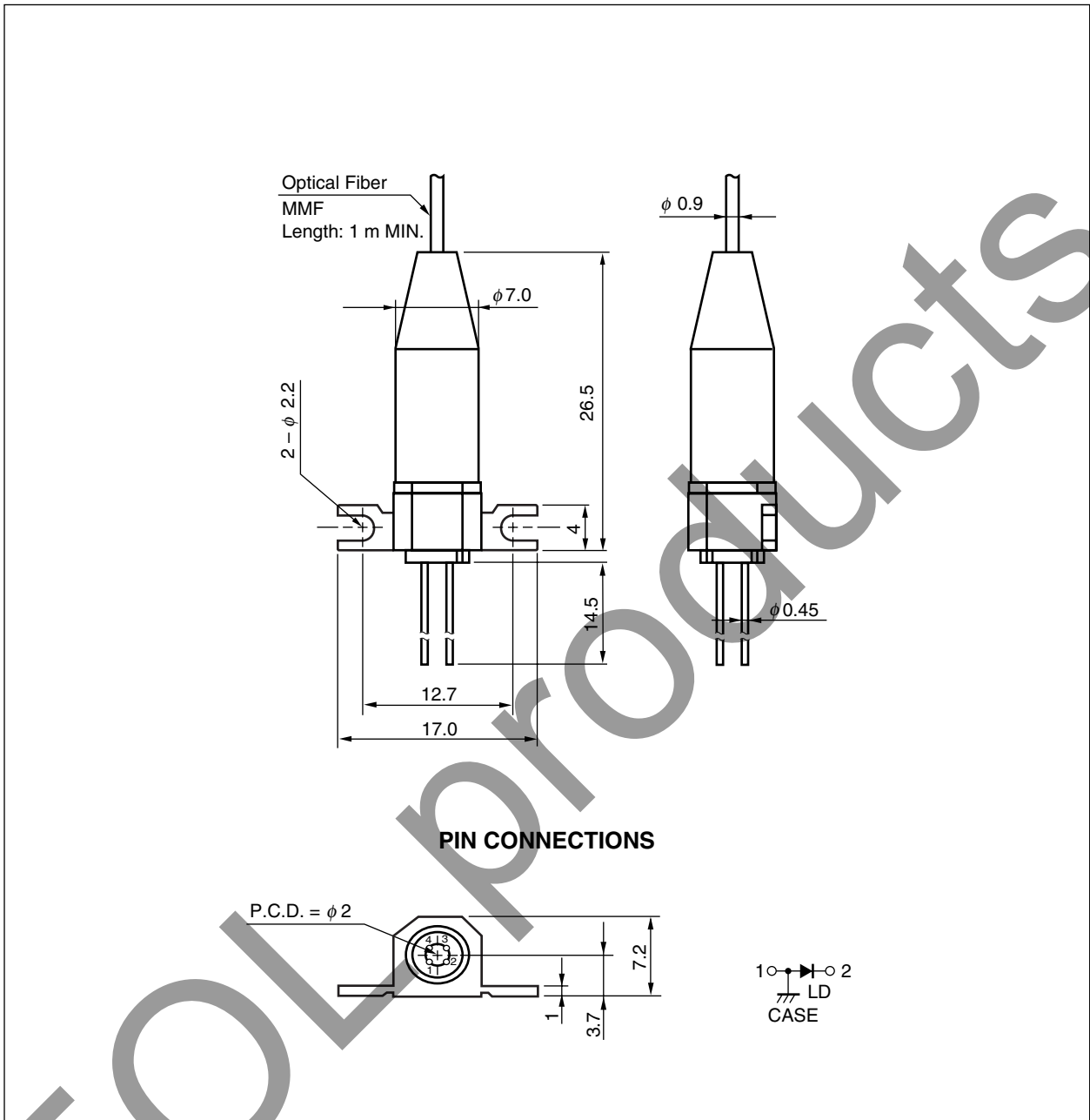
- High output power $P_f = 180 \text{ mW} @ I_{FP} = 800 \text{ mA}^{*1}$
- Long wavelength $\lambda_c = 1\,310 \text{ nm}$

*1 Pulse Conditions: Pulse width (PW) = 10 μs , Duty = 1%



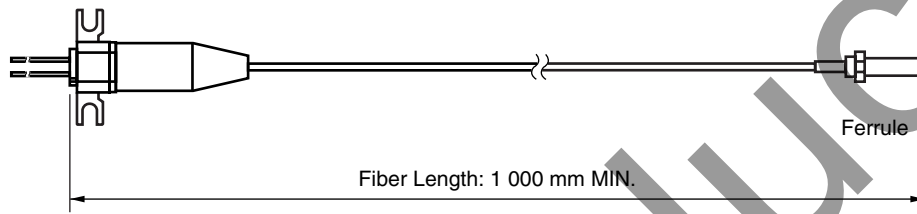
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PACKAGE DIMENSIONS (UNIT: mm)



OPTICAL FIBER CHARACTERISTICS

Parameter	Specification	Unit
Mode Field Diameter	50±3	μm
Cladding Diameter	125±2	μm
Maximum Cladding Noncircularity	2	%
Maximum Core/Cladding Concentricity	4	%
Outer Diameter	0.9±0.1	mm
Minimum Fiber Bending Radius	30	mm
Fiber Length	1 000 MIN.	mm



ORDERING INFORMATION

Part Number	Flange Type
NX7337BJ-AA	flat mount flange

ABSOLUTE MAXIMUM RATINGS (Tc = 25°C, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Pulsed Forward Current*1	I _{FP}	1.2	A
Reverse Voltage	V _R	2.0	V
Operating Case Temperature	T _C	-20 to +60	°C
Storage Temperature	T _{stg}	-40 to +85	°C
Lead Soldering Temperature	T _{slid}	350 (3 sec.)	°C
Relative Humidity (noncondensing)	RH	85	%

*1 Pulse Condition: Pulse Width (PW) = 10 μs, Duty = 1%

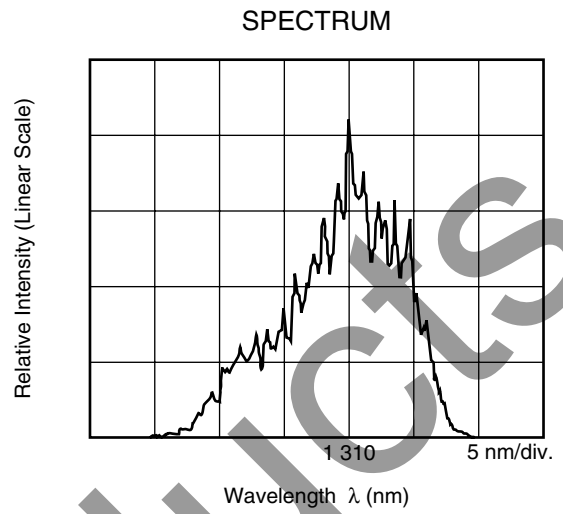
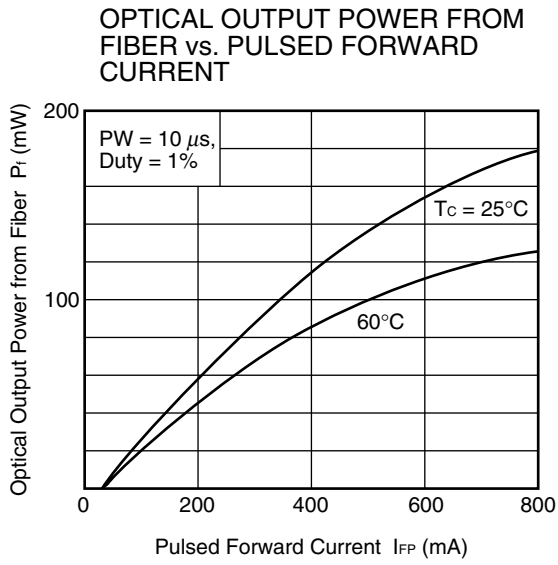
ELECTRO-OPTICAL CHARACTERISTICS (Tc = 25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward Voltage	V _{FP}	I _{FP} = 800 mA, PW = 10 μs, Duty = 1%		2.5	4.0	V
Threshold Current	I _{th}			35	65	mA
Optical Output Power from Fiber	P _f	I _{FP} = 800 mA, PW = 10 μs, Duty = 1%	150	180		mW
Center Wavelength	λ _C	RMS (-20 dB), I _{FP} = 800 mA, PW = 10 μs, Duty = 1%	1 290	1 310	1 330	nm
Spectral Width	σ	RMS (-20 dB), I _{FP} = 800 mA, PW = 10 μs, Duty = 1%			10.0	nm
Rise Time	t _r	10-90%			2.0	ns
Fall Time	t _f	90-10%			2.0	ns

ELECTRO-OPTICAL CHARACTERISTICS (Tc = 0 to +60°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold Current	I _{th}				80	mA
Optical Output Power from Fiber	P _f	I _{FP} = 800 mA, PW = 10 μs, Duty = 1%	75			mW
Center Wavelength	λ _C	RMS (-20 dB), I _{FP} = 800 mA, PW = 10 μs, Duty = 1%	1 280		1 342.5	nm
Temperature Dependency of Center Wavelength	Δλ/ΔT			0.35		nm/°C
Spectral Width	σ	RMS (-20 dB), I _{FP} = 800 mA, PW = 10 μs, Duty = 1%			10	nm

TYPICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$, unless otherwise specified)



Remark The graphs indicate nominal characteristics.

REFERENCE

Document Name	Document No.
Opto-Electronics Devices Pamphlet	PX10160E

EOL products

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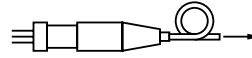
SAFETY INFORMATION ON THIS PRODUCT

DANGER

INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM

OUTPUT POWER _____mW MAX
WAVELENGTH _____nm
CLASS IIIb LASER PRODUCT

SEMICONDUCTOR LASER



**AVOID EXPOSURE-Invisible
Laser Radiation is emitted from
this aperture**

Warning	Laser Beam	<p>A laser beam is emitted from this diode during operation.</p> <p>The laser beam, visible or invisible, directly or indirectly, may cause injury to the eye or loss of eyesight.</p> <ul style="list-style-type: none"> • Do not look directly into the laser beam. • Avoid exposure to the laser beam, any reflected or collimated beam.
Caution	GaAs Products	<p>This product uses gallium arsenide (GaAs).</p> <p>GaAs vapor and powder are hazardous to human health if inhaled or ingested, so please observe the following points.</p> <ul style="list-style-type: none"> • Follow related laws and ordinances when disposing of the product. If there are no applicable laws and/or ordinances, dispose of the product as recommended below. <ol style="list-style-type: none"> 1. Commission a disposal company able to (with a license to) collect, transport and dispose of materials that contain arsenic and other such industrial waste materials. 2. Exclude the product from general industrial waste and household garbage, and ensure that the product is controlled (as industrial waste subject to special control) up until final disposal. • Do not burn, destroy, cut, crush, or chemically dissolve the product. • Do not lick the product or in any way allow it to enter the mouth.
Caution	Optical Fiber	<p>A glass-fiber is attached on the product. Handle with care.</p> <ul style="list-style-type: none"> • When the fiber is broken or damaged, handle carefully to avoid injury from the damaged part or fragments.

