



## ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

(TC = 25°C, unless otherwise specified)

SYMBOLS	PARAMETERS	UNITS	MIN	MAX
V <sub>CC</sub>	Power Supply Voltage	V	-0.3	+4.0
T <sub>STG</sub>	Storage Temperature	°C	-40	+85
P <sub>f</sub>	Input Optical Power	dBm	-	0
V <sub>IN</sub>	Signal Input Voltage	V	-0.3	V <sub>CC</sub> +0.3
T <sub>SOL</sub>	Lead Soldering Temperature	°C/sec	-	260/10
R	Bending Radius of Pigtail Fiber	mm	30	-
	Tensile Force on Pigtail <sup>2</sup>	N	-	2

Notes:

1. Operation in excess of any one of these parameters may result in permanent damage.
2. = 200 gf

## RECOMMENDED OPERATING CONDITIONS

SYMBOL	PARAMETER	UNITS	MIN	TYP	MAX	REMARKS
T <sub>OP</sub>	Ambient Temperature	°C	-40	-	+85	
HA	Ambient Humidity	%	5	-	95	
V <sub>CC</sub>	Power Supply Voltage	V	+3.135	+3.300	+3.465	
I <sub>OP</sub>	Power Supply Current	mA	-	-	350	Not include LVPECL termination current
	Power Supply Noise	mVpp	-	-	100	Noise frequency at 100 Hz to 1 MHz

## OPTICAL INTERFACE

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### TRANSMITTER SECTION

ITEMS	UNIT	SPECIFICATIONS	REMARKS
		OD-B6211-ONUB	
Operating wavelength	nm	1260 to 1360	
Normal bit rate	Mb/s	155.52	
Line code	-	Scrambled NRZ (burst-mode)	
Photo diode	-	MLM-LD	
Mean output power	dBm	-4 to +2	
Optical output waveform	-	Mask spec	Figure 2 (after passing through a 4th-order Thomson filter; f <sub>c</sub> = 0.75 x 155.52 MHz)
Extinction ratio	dB	more than 10	
Spectral width (RMS)	nm	less than 5.8	
Launched optical power without input to the transmitter	dBm	less than -40	
Consecutive identical digit immunity	bit	more than 72	
Tolerance to the transmitter incident light power	dB	more than -15	
Maximum reflectance	dB	less than -6	measured at wavelength of 1.3μm
Jitter Transfer	-	Mask spec	Figure 3
Jitter Tolerance	UI <sub>p-p</sub>	less than 0.2	frequency range from 0.5 kHz to 1.3 MHz

## OPTICAL INTERFACE

### RECEIVER SECTION

ITEMS	UNIT	SPECIFICATIONS	REMARKS
		OD-B6211-ONUB	
Operating wavelength	nm	1480 to 1580	
Normal bit rate	Mb/s	622.08+/-100ppm	
Line code	-	Scrambled NRZ (continuous-mode)	
Photo diode	-	PIN-PD	
Minimum sensitivity	dBm	less than -28	Bit error rate is $10^{-10}$ at $2^{23}$ -1 pattern
Maximum overload	dBm	more than -6	Bit error rate is $10^{-10}$ at $2^{23}$ -1 pattern
Consecutive identical digit immunity	bit	more than 72	
Tolerance to the reflected optical power	dB	less than 10	
Maximum reflectance	dB	less than -20	measured at wavelength of $1.5\mu\text{m}$
Jitter Transfer	-	Mask spec	Figure 3
Jitter Tolerance	-	Mask spec	Figure 4

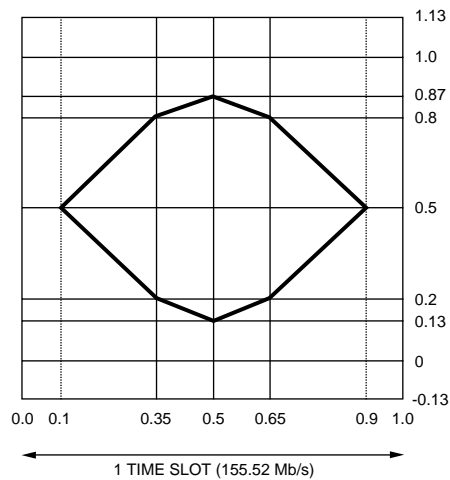


FIGURE 2. Mask of eye diagram

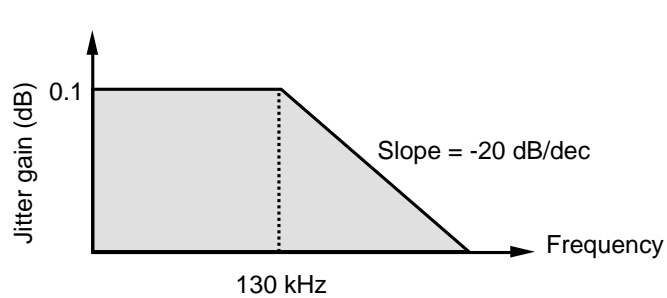


FIGURE 3. Jitter transfer mask

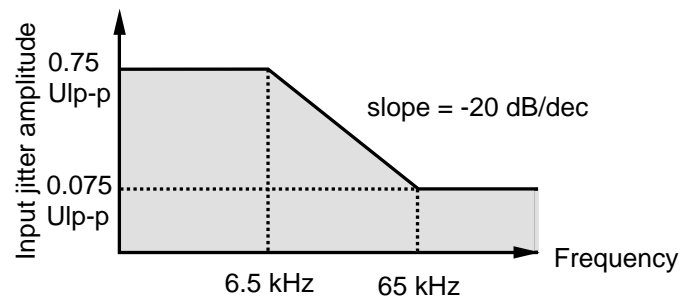
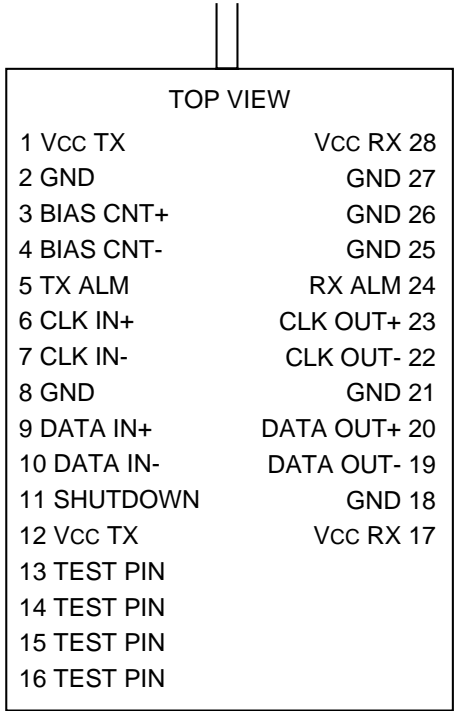


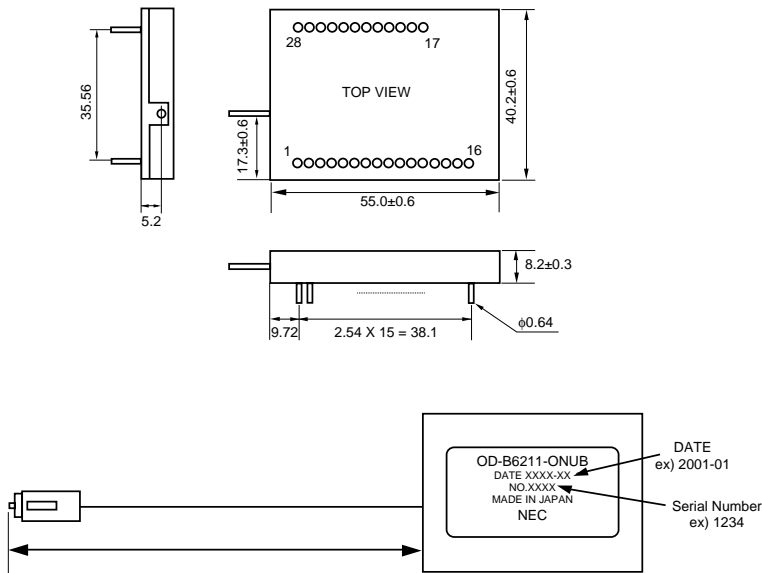
FIGURE 4. Jitter tolerance mask

PIN CONNECTIONS



	PIN NO.	INPUT/ OUTPUT	SYMBOL	DESCRIPTION
TX	1	-	VCC TX	Transmitter power supply (+3.3V)
	2	-	GND	Ground
	3	I	BIAS CNT+	Laser bias control (positive)
	4	I	BIAS CNT-	Laser bias control (negative)
	5	O	TX ALM	Optical output alarm
	6	I	CLK IN+	Clock input (positive)
	7	I	CLK IN-	Clock input (negative)
	8	-	GND	Ground
	9	I	DATA IN+	Data input (positive)
	10	I	DATA IN-	Data input (negative)
	11	I	SHUTDOWN	Optical output shut down
	12	-	VCC TX	Transmitter power supply (+3.3V)
	13	-	TEST PIN	Connect to ground
	14	-	TEST PIN	Connect to ground
	15	-	TEST PIN	Connect to ground
	16	-	TEST PIN	Connect to ground
RX	17	-	VCC RX	Receiver power supply (+3.3V)
	18	-	GND	Ground
	19	O	DATA OUT-	Data output (negative)
	20	O	DATA OUT+	Data output (positive)
	21	-	GND	Ground
	22	O	CLK OUT-	Clock output (negative)
	23	O	CLK OUT+	Clock output (positive)
	24	O	RX ALM	Optical input alarm
	25	-	GND	Ground
	26	-	GND	Ground
	27	-	GND	Ground
	28	-	VCC RX	Receiver power supply (+3.3V)

OUTLINE DIMENSIONS (Units in mm)



Note: Default pigtail fiber length (L) is 540 (+0/-40) mm.  
Default optical connector is SC type.