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In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

Operating condition	Storage temperature range (before unpacking)	-10 to +60 [deg. C] (40 to 75%RH)	Storage temperature range(after mounting, but not operating)	-40 to +85 [deg. C] (85%RH MAX) No freezing and condensing
	Operating temperature range	-10 to +85 [deg. C] (85%RH MAX) No freezing and condensing	Characteristic impedance	Differential 100 [ohm]
	Input signal IF	SLVS-200	ACTIVATE voltage	1.0 to 3.6V
	Input signal voltage	Differential voltage 200 to 1400 mVp	Input power voltage	3.0 to 3.6V (typ 3.3V)
	Suitable connector	(BF4-IR2) BF4-IR2-16P-0.5SH, (LC) Duplex-LC adapter		

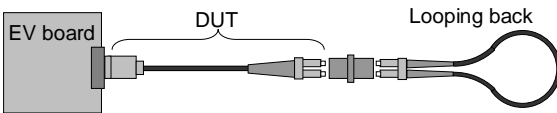
SPECIFICATIONS

ITEM	TEST METHOD	REQUIREMENTS	QT	AT
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CONSTRUCTION

Dimension, Construction and Finishing	Check visually and measure dimension with dimension measurement instrument.	According to the drawing	X	X
Marking	Check visually.		X	X

ELECTRIC CHARACTERISTICS

Data rate performance	Measure eye diagram when input differential 200mVp signal.	No mask hit at 0.05 to 6.25 Gbps(The mask should be similar to standard Ethernet mask)	X	-
	Measure eye diagram during VDD=3.3V and input 6.25Gbps PRBS7 differential 200mVp signal.	No mask hit(The mask should be similar to standard Ethernet mask)	X	X
				
Signal detect (OE-SDn)	Shall be turned OE-SDn=Low when EO-ACT=High. (Same measurement method as "Data rate")	OE-SDn voltage -0.3 to 1.0V	X	X
ACT detect (EO-ACTn)	Shall be turned EO-ACTn=Low when TX is in active mode.	EO-ACTn voltage -0.3 to 1.0V	X	X
Bit error rate (BER)	Measure BER with BERT during input VDD=3.3V and differential 6.25Gbps PRBS7 200mVp signal.	$< 1 \times 10^{-12}$	X	-
Power consumption	Measure current by digital multimeter during operating condition at VDD=3.3V.	$\leq 160\text{mW}$	X	-
Output signal voltage	Shall be checked by eye diagram when input 6.25Gbps PRBS7 differential 200mVp signal.	160 to 330mVp	X	X

OPTICAL CHARACTERISTICS

Insertion loss (IL)	Measure insertion loss (LC) before termination of BF4M-FRM. (HRS check IL in production process, not in final inspection)	$\leq 0.5\text{dB}$	X	X
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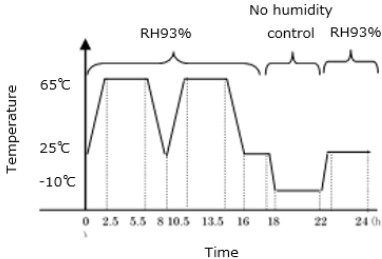
COUNT	DESCRIPTION OF REVISIONS	DESIGNED	CHECKED	DATE
1	DIS-K-00002296	TY.SATO	TS.YAMAZAKI	20200302

REMARK Each test item shall be checked by mating with suitable receptacle connector on evaluation board (BF4-IR2) or suitable adapter (LC). This specifications sheet is based on using BF4MC type in BF4-FRM.	APPROVED	YY.HIYAMA	20200210
	CHECKED	TS.YAMAZAKI	20200210
	DESIGNED	TY.SATO	20200210
	DRAWN	SK.AOYAMA	20200207

Note QT:Qualification Test, AT:Assurance Test	DRAWING NO.	ELC-391674-00-00
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HRS	SPECIFICATION SHEET	PART NO.	BF4-IR2LCD-01-1M	
	HIROSE ELECTRIC CO., LTD.	CODE NO.	CL831-1273-0-00	△ 1/2

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SPECIFICATIONS					
ITEM	TEST METHOD	REQUIREMENTS	QT	AT	
OPTICAL CHARACTERISTICS					
LED light emission (Green)	Apply V=3.0 to 3.6V at the pin, then check if LED light is visible or not.	Green light shall be visible	X	X	
LED light emission (Amber)	Apply V=3.0 to 3.6V at the pin, then check if LED light is visible or not.	Amber light shall be visible	X	X	
MECHANICAL CHARACTERISTICS					
Mating Durability	(BF4-IR2) 1000 cycles of mating and unmating with BF4-IR2 socket.	No looseness, breakage and cracks (Visual and data transmission check before and after test)	X	-	
	(LC) 100 cycles of mating and unmating with LC adapter.		X	-	
Vibration	Vibration for 2 hours in 3 directions, at an amplitude of 1.5mm with the frequency range 10 to 55 [Hz].		X	-	
Shock	3 times and 3 directions with the acceleration 490 [m/s ²] in duration 11ms.		X	-	
Fiber clamping strength	Loading tensile force to the fiber until break for same direction with fiber exit.		> 10N	X	-
ENVIRONMENTAL CHARACTERISTICS					
Transportation and storage temperature and humidity test	Applying temperature and humidity load as below Before test measurement 23 deg.C Cold test -20 deg.C (soak time: 72hours) Intermediate measurement 23 deg.C Damp heat test +60 deg.C, 90%Rh (soak time: 72hours) After test measurement 23 deg.C	No looseness, breakage and cracks (Visual and data transmission check before test, intermediate test and after test)	X	-	
Temperature cycling test	-40 to 85 degree Celsius with dwell time of 10min, 100 cycles		X	-	
High temperature storage	85 degree Celsius, 1000 hours		X	-	
Low temperature storage	-40 degree Celsius, 1000 hours		X	-	
Temperature and Humidity cycling	Temperature, Humidity: 10 ⇔ 65 degree Celsius, 93%RH w/o applying current. Number of cycle: 10 cycles, Cycle time: 24 hours/cycle 		X	-	
ESD tolerance	(BF4MB-FRM) Applied voltage 500V (Human Body Model)		X	-	
<div style="display: flex; align-items: center;"> Correction of errors </div>					
Note QT:Qualification Test AT:Assurance Test X:Applicable Test			DRAWING NO.		ELC-391674-00-00
HRS	SPECIFICATION SHEET		PART NO.	BF4-IR2LCD-01-1M	
	HIROSE ELECTRIC CO., LTD.		CODE NO	CL831-1273-0-00	2/2