PRODUCTS SPECIFICATION

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DESCRIPTION	:	IDB-POF Connector and Patch Cord
CUSTOMER	:	
COMOSS P/N	:	IDBPP and OPF Series
Date of Issue	:	Jan/15/2004
Version	:	1.0
Designer	:	Keith

Approval

Customer Signature

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COMOSS ELECTRONIC CO., LTD.

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Subject: Product Specification – IDB POF Connector and Patch Cord

1.0 General

This specification describes the optical, mechanical and environmental characteristics of IDB-1394 POF connectors (IDBPP Series) and patch cords (OPF Series). All performance are designed for complying with 1394 Automotive Specification (IDB-1394) Draft 1.0.

2.0 Series Description

IDBPP Series (Connector)

Please review the detail order information at COMOSS website.

OPF Series (Patch Cord)

Please review the detail order information at COMOSS website.

3.0 Application

(1) Maximum Distance: 18 meters

(2) Ambient Temperature Range: -40 to +85ºC

4.0 Overall Dimensions

See attachment

5.0 Sample Quantities by Performance Group

	Number of Sample by Group					
Sample Description	A	B	C	D	E	F
IDB-POF Cable Assembly of 7±0.1m	11	11	11	11	11	0
IDB-POF Cable Assembly of 3±0.1m	0	0	0	0	0	11

Performance Group A - POF Connectors and Patch Cords Insertion Loss

Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
A1	Insertion Loss	ANSI/EIA 455-34 A	Cut back method	Insertion loss 2.5dB Max

Performance Group B – POF Connectors and Patch Cords Insertion Loss when Subjected to Durability, Thermal Aging, Stepped Temperature, Thermal Shock, Dust and Humidity.

Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
B1	Durability	TIA 455 21 A 10 cycles; manual cycling at a rate of 300 cycles/h max	Insertion Loss ANSI/EIA 455-34 A	Initial baseline measurement 2.5dB MAX.
B2	Thermal Aging	ISO8092-2 (00) Par 4.18 85ºC Mated; Energized; collect data at 100h, 200h, 500h, 1000h	Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max
B3	Stepped Temperature	ISO 16750-1 Par. 5.2 Class 85: Temperature: +25ºC to -40ºC to +85ºC Mated; Energized; Change temperature in 5ºC steps; 0.5h or until temperature equilibrium is reached;	Continuity	Detector sensitivity at 50% of open circuit voltage for 1μ sec.
B4	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max
B5	Thermal Shock	ISO 8092-2 Par 4.23 Class 85 : 100 Cycles (-40ºC to +85ºC) Mated; Energized	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.
B6	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max
B7	Dust	ISO 8092-2 (00) Par. 4.22 6 h @ 23ºC 16h @ 63ºC (no dust) 6 h @ 63ºC Mated; energized 8h agitate every 15 min.	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.

B8	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max

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Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
B9	Humidity (cyclic)	ISO 8092-2 Par.4.10 10 cycles (240 h) (+25ºC and 45-75 %RH to +65ºC and 95% RH to -40ºC and RH uncontrolled; nonenergized)	Insertion loss ANSI/EIA-455-34A	Insertion loss 2.5dB MAX.
Performance Group C – POF Connectors and Patch Cords Insertion Loss when Subjected to Mechanical Shock, Vibration and Impact				
Item	**Description**	**Testing Method and condition**	**Characteristic and Measuring Method**	**Requirements**
C1	Mechanical Shock	ISO 8092-2 (00) Par 4.19 [100 g' s with 5ms duration] 1000 shocks in both directions of three mutually perpendicular axis; mated; energized)	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.
C2	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max
C3	Vibration	ISO 8092-2 (00) Par 4.11 Class B [10 - 81Hz with ±0.75 displacement; 81 to 500Hz at 20 g' s and 500 to 2000Hz at 18 g' s] 8h in each mutually perpendicular axis Mated; Energized	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.
C4	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max
C5	Impact (Drop)	ISO 8092-2 (00) Par 4.20 8 drops from: a. 1.2m b. 2.4m Mated; Energized	Continuity	Detector sensitivity at 50% of open circuit voltage for 1 μ sec.

C6	None		Insertion Loss ANSI/EIA-455-34A	Insertion loss 2.5dB Max	
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Performance Group D – POF Connectors and Patch Cords Mechanical Constrain					
Item	**Description**	**Testing Method and condition**	**Characteristic and Measuring Method**	**Requirements**	
D1	Mating and unmating forces	ISO 8092-2 Par. 4.3 Manual mating or unmating	Mating only	45N Maximum	
			Unmating only	45N maximum with latch depressed.	
D2	Latch Retention	ISO 8092-2 Par. 4.3 Mate only	Latch Retention ANSI/EIA 364-38A-83 (90) pull at a rate of 50 mm/min	100N minimum with latch engaged.	
Performance Group E – POF Connectors and Patch Cords General Tests					
Item	**Description**	**Testing Method and condition**	**Characteristic and Measuring Method**	**Requirements**	
E1	None		Cavity to Cavity Isolation(10 plugs and 10 sockets) IEC 61300 Par. 3.8	-30dB less than reference sensitivity level	
E2	Cable axial pull (10 plugs)	ANSI/EIA 455-6 B (92) Fix plug housing and apply load of 50N for one minute on cable axis.	Visual ANSI/EIA-455-13A	No jacket tears of visual exposure of POF. No jacket movement greater than 1.5mm at the point of exit.	
E3	Cable flexing (10 plugs)	ANSI/EIA 455-1 B (98) Condition I, dimension "X"=5.5 times cable diameter; 100 cycles in each of two planes.	Visual ANSI/EIA-455-13A	No jacket tears of visual exposure of POF. No jacket movement greater than 1.5mm at the point of exit.	

Performance Group F – POF Cable Attenuation when Subjected to Torsion Stress

Item	Description	Testing Method and condition	Characteristic and Measuring Method	Requirements
F1	None		Attenuation IEC 60793-1-40 Method B	Initial baseline measurement 0.75dB MAX.
F2	Static Torsion	IEC 60794-1-2-E-7 (99) Torsion Angle 360º for 10 cycles	Attenuation IEC 60793-1-40 Method B	Maximum change of ±0.8dB from initial baseline measurement and 1.55dB MAX.
F3	Cyclic Torsion	IEC 61300-2-5 (95) To Be Confirmed. Torsion Angle ± 180º for 10000 cycles	Attenuation IEC 60793-1-40 Method B	Maximum change of ±0.8dB from initial baseline measurement and 1.55dB MAX.