

## Optical Connector Performance

Connector Type	SC type Adaptor with a shutter SC-FC type Conversion Adaptor with a shutter		
Item number	LGC-SA3( ), LGC-SF2A3( ), LGC-SH4A3( ) LGC-SA303/A112( )		
Quotation standard	JIS C 5964-4 (IEC 61754-4) Fiber optic connector interfaces-Part 4: Type SC connector family (F04 Type) JIS C 5964-13 (IEC 61754-13) Fiber optic connector interfaces-Part 13: Type FC-PC connector family (F01 Type) JIS C 5965 (IEC 61755) Fiber optic connector optical interfaces JIS C 5970 F01 Type Connectors for Optical Fiber Cables JIS C 5973 F04 Type Connectors for Optical Fiber Cables JIS C 61300 (IEC 61300) Fiber optic interconnecting devices and passive components-Basic test and measurement procedures		
Classification	Test item	Requirement condition	Test method
	No.		
Structure	1	Appearance, Construction and Dimensions	Accordance to production drawing and quotation standard. JIS C 61300-3-1:2013
	2	Fitting	Engagement without mechanical abnormality. JIS C 5961:2005 Clause 5
Optical performance	3	Insertion Loss	$\leq 0.3$ dB JIS C 61300-3-4:2011 Wavelength : 1.31 $\mu$ m(LD) Application optical fiber : SM(9.5/125)
	4	Light Blocking (power reduction)	$\geq 17$ dB (Measuring on optical axis) Company standard
Mechanical performance	5	Vibration	JIS C 61300-2-1:2012 Frequency range : 10~55 Hz Amplitude(one side) : 0.75 mm Endurance duration per axis :30 min for X, Y, and Z all directions Insertion Loss after test : $\leq 0.3$ dB
	6	Shock	JIS C 61300-2-9:2012 There shall be no physical or mechanical damage to the connector. Peak acceleration : 981m/s <sup>2</sup> Direction : X,Y,Z 3axes
	7	Mating durability	JIS C 61300-2-2:2011 Number of cycles : 500 times
	8	Withdrawal force from a resilient alignment sleeve using gauge pins	Withdrawal force : 2 N~6 N JIS C 61300-3-33:2014 Gauge Dia. : 2.499 mm $\pm$ 0.0005 mm

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Mechanical performance	9	Engagement and separation forces	<ul style="list-style-type: none"> <li>Engagement force : <math>\leq 19.6\text{N}</math></li> <li>Separation force : <math>\leq 19.6\text{N}</math> (With simplex SC type plug)</li> </ul>	JIS C 61300-3-11:2013												
	10	Tensile strength of coupling mechanism	Insertion Loss after test : $\leq 0.3\text{ dB}$  There shall be no physical or mechanical damage to the connector.	JIS C 61300-2-6:2014  Retention force : 68.6N (With simplex SC type plug)												
Environmental performance	11	Change of Temperature		JIS C 61300-2-22:2012  Temperature : $-25\text{ }^{\circ}\text{C} \sim +70\text{ }^{\circ}\text{C}$ Duration : 12 cyc.												
	12	Composite temperature / humidity cyclic	Insertion Loss after test : $\leq 0.3\text{ dB}$  There shall be no physical or mechanical damage to the connector.	JIS C 61300-2-21:2012  Temperature : $-10\text{ }^{\circ}\text{C} \sim +25\text{ }^{\circ}\text{C} \sim +65\text{ }^{\circ}\text{C}$ Humidity : $93\% \pm 3\%$ Duration : 10 cyc.												
	13	Dry Heat		JIS C 61300-2-18:2009  Temperature : $+70\text{ }^{\circ}\text{C}$ Duration : 240 h												
	14	Cold		JIS C 61300-2-17:2009  Temperature : $-25\text{ }^{\circ}\text{C}$ Duration : 240 h												
	15	Salt mist	There shall be no corrosion to the connector.	JIS C 61300-2-26:2013  Concentration : $5\% \pm 1\%$ Duration : 48 h												
Note	• Insertion loss test is measured by reference plug cord.			<table border="1"> <tr> <td>By</td> <td>Prepared <i>Y. Ohkubo</i></td> <td>Checked <i>T. Yoshizaki</i></td> <td>Approved <i>Y. Kato</i></td> </tr> <tr> <td>Signature</td> <td><i>Y. Ohkubo</i></td> <td><i>T. Yoshizaki</i></td> <td><i>Y. Kato</i></td> </tr> <tr> <td colspan="2">Honda Tsushin Kogyo Co.,Ltd. Tokyo Japan</td> <td colspan="2">Date : Oct, 19, 2015</td> </tr> </table>	By	Prepared <i>Y. Ohkubo</i>	Checked <i>T. Yoshizaki</i>	Approved <i>Y. Kato</i>	Signature	<i>Y. Ohkubo</i>	<i>T. Yoshizaki</i>	<i>Y. Kato</i>	Honda Tsushin Kogyo Co.,Ltd. Tokyo Japan		Date : Oct, 19, 2015	
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