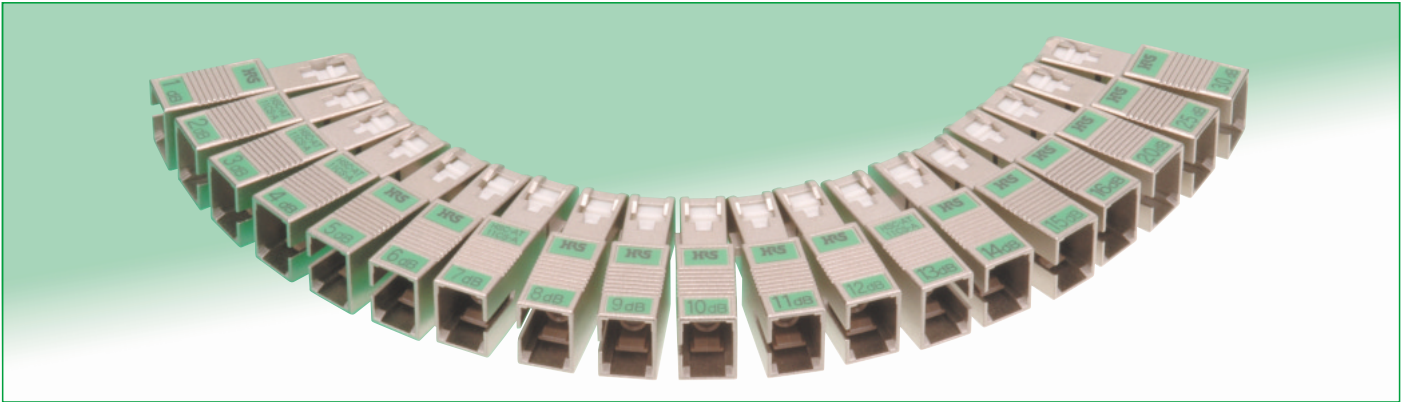


SC-Type Optical Fixed Attenuators

HSC-AT11CS Series



Features

1. Low return loss, 60 dB min.*
2. Complies with Telcordia GR-910-CORE.
3. High input power (250 mW max.)
4. Variety of fixed attenuation levels.
1 to 16 dB (in 1 dB increments), 20, 25, and 30 dB

Applications

Optical communication and data transfer equipment requiring in-line fixed power level adjustment.

Ordering Information

HSC-AT-11-CS-A-**-**

① ② ③ ④ ⑤ ⑥

① Series name: HSC	④ Polishing code CS: APC (≥ 60 dB)
② Attenuator	⑤ Optical fiber type A: Single Mode
③ Specification series	⑥ In-line mating with a standard SC connectors : 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 20, 25, 30

Part Number	CL No.	Attenuation	Attenuation Tolerance	Return Loss	Wavelength	Split Sleeve	Fiber Type
HSC-AT11CS-A01	820-9001-2	1dB	+0.8dB	≥ 60 dB	1310nm 1550nm	Zirconia	SM
HSC-AT11CS-A02	820-9002-5	2dB	± 0.8 dB				
HSC-AT11CS-A03	820-9003-8	3dB	± 0.8 dB				
HSC-AT11CS-A04	820-9004-0	4dB	± 0.8 dB				
HSC-AT11CS-A05	820-9005-3	5dB	± 0.8 dB				
HSC-AT11CS-A06	820-9006-6	6dB	± 0.8 dB				
HSC-AT11CS-A07	820-9007-9	7dB	± 0.8 dB				
HSC-AT11CS-A08	820-9008-1	8dB	± 0.8 dB				
HSC-AT11CS-A09	820-9009-4	9dB	± 0.9 dB				
HSC-AT11CS-A10	820-9010-3	10dB	± 1.0 dB				
HSC-AT11CS-A11	820-9011-6	11dB	± 1.1 dB				
HSC-AT11CS-A12	820-9012-9	12dB	± 1.2 dB				
HSC-AT11CS-A13	820-9013-1	13dB	± 1.3 dB				
HSC-AT11CS-A14	820-9014-4	14dB	± 1.4 dB				
HSC-AT11CS-A15	820-9015-7	15dB	± 1.5 dB				
HSC-AT11CS-A16	820-9016-0	16dB	± 1.5 dB				
HSC-AT11CS-A20	820-9017-2	20dB	± 1.5 dB	≥ 60 dB	1310nm 1550nm	Zirconia	SM
HSC-AT11CS-A25	820-9018-5	25dB	± 1.5 dB				
HSC-AT11CS-A30	820-9019-8	30dB	± 2.5 dB				

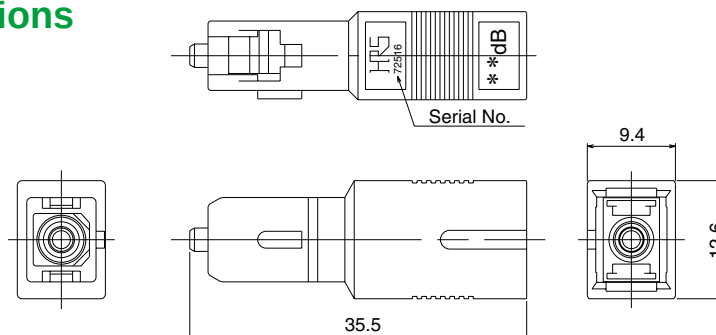
■Specifications

Rating	Operating temperature range	-40℃ to +75℃	Max. input power	250 mW
	Storage temperature range	-40℃ to +75℃	Fiber type	SMF

Characteristic		Test Method (Conforms with Telcordia GR-910-CORE)	Specification
Optical characteristic	Attenuation	Measurement at a point within the wavelength of 1310 ±30 nm and a point within the wavelength of 1550 ±30 nm.	Refer to the various types of attenuation tolerance (the previous page).
	Return loss		60 dB min.
	Rated input power	Power : 250mW(LD) Wavelength : 1470nm Duration : 100 hours	After / during test, changing in attenuation(fluctuation)shall be less than ±0.1dB.
Environmental characteristic	Controlled Operating Environment	Temperature : -5℃ to 50℃ Duration : 182.5 hours Humidity : 15% to 90%	1) After test, change in attenuation(fluctuation)and return loss shall be as follows. • Attenuation(fluctuation) : within 0.5 dB • Return loss : 60 dB min. 2) No breakage, crack or dislocation of components.
	Uncontrolled Operating Environment	Temperature : -40℃ to 75℃ Period of 1 cycle : 8 hours Number of cycles : 21	
	Non-Operating Environment	Low-Temperature Exposure and Thermal Shock Temperature : 23℃ → 40℃ → -40℃ → 23℃ Duration : 2.1h 72 h 5 min. minimum	
		High-Temperture Exposure and Thermal Shock Temperature : 23℃ → 70℃ → 70℃ → 23℃ Duration : 1.6h 72 h 5 min. minimum	
		High Relative Humidity Exposure Temperature : 23℃ → 40℃ → 40℃ → 23℃ Duration : 0.6h 96 h 0.6h Humidity : 90% to 95%	
	Humidity/Condensation Cycling Test	Temperature : -10℃ to 65℃ Period of 1 cycle : 12 hours Humidity : 90% to 100% Number of cycles : 14	
	Water Immersion	Temperature : 43℃ Duration : 168 hours Solution : PH 5.5	
Mechanical characteristics	Vibration	Vibration frequency range : 10 to 55 Hz Maximum amplitude: 1.52 mm Duration : 2 hours in each of 3 directions	1) After /during test, change in attenuation(fluctuation)and return loss shall be as follows. • Attenuation(fluctuation) : within 0.5 dB • Return loss : 60 dB min. 2) No breakage, crack or dislocation of components. 1) After test, change in attenuation(fluctuation)and return loss shall be as follows. • Attenuation(fluctuation) : within 0.5 dB • Return loss : 60 dB min. 2) No breakage, crack or dislocation of components.
	Side Pull Load	Bend angle : 90° Load : 1.25 kg	
	Cable Retention	Load : 2 kg	
	Durability	Insertion/withdrawal cycles : 200	
	Impact Test	Drop onto a concrete floor from a height of 1.8 m. Cycles: 8 times in each of 3 directions	

■Materials and Dimensions

Component	Material
Body	Zinc alloy
Ferrule	Zirconia
Split sleeve	Zirconia



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