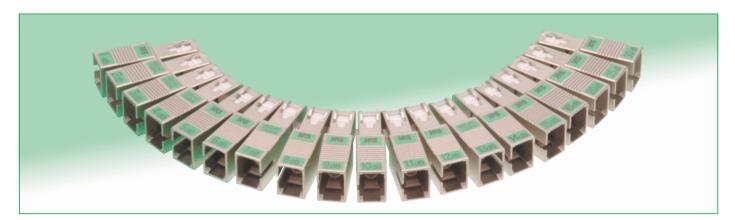
SC-Type Optical Fixed Attenuators

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-**

9896

1 Series name: HSC	4	Polishing code	CS: APC (>=60dB)
Attenuator	Attenuator 6 Optical		A: Single Mode
Specification series	0	In-line mating with a standard	: 01, 02, 03, 04, 05, 06, 07, 08, 09,
		SC connectors	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				
HSC-AT11CS-A02	820-9002-5	2dB	±0.8dB				
HSC-AT11CS-A03	820-9003-8	3dB	±0.8dB				
HSC-AT11CS-A04	820-9004-0	4dB	±0.8dB				
HSC-AT11CS-A05	820-9005-3	5dB	±0.8dB				
HSC-AT11CS-A06	820-9006-6	6dB	±0.8dB				
HSC-AT11CS-A07	820-9007-9	7dB	±0.8dB				
HSC-AT11CS-A08	820-9008-1	8dB	±0.8dB				
HSC-AT11CS-A09	820-9009-4	9dB	±0.9dB		1310nm		
HSC-AT11CS-A10	820-9010-3	10dB	±1.0dB	≧60dB	1550nm	Zirconia	SM
HSC-AT11CS-A11	820-9011-6	11dB	±1.1dB		15501111		
HSC-AT11CS-A12	820-9012-9	12dB	±1.2dB				
HSC-AT11CS-A13	820-9013-1	13dB	±1.3dB				
HSC-AT11CS-A14	820-9014-4	14dB	±1.4dB				
HSC-AT11CS-A15	820-9015-7	15dB	±1.5dB				
HSC-AT11CS-A16	820-9016-0	16dB	±1.5dB				
HSC-AT11CS-A20	820-9017-2	20dB	±1.5dB				
HSC-AT11CS-A25	820-9018-5	25dB	±1.5dB				
HSC-AT11CS-A30	820-9019-8	30dB	±2.5dB				

■Specifications

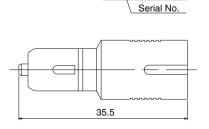
Rating	Operating temperature range	-40℃ to +75℃	Max. input power	250 mW
Railing	Storage temperature range	-40℃ to +75℃	Fiber type	SMF

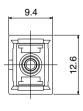
	Characteristic	Test Method (Conforms with Telcordia GR-910-CORE)	Specification		
Optical o	Attenuation	Measurement at a point within the wavelength of 1310 \pm 30	Refer to the various types of attenuation tolerance (the previous page).		
	Return loss	nm and a point within the wavelength of 1550 ± 30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

■Materials and Dimensions

Component	Material	
Body	Zinc alloy	
Ferrule	Zirconia	
Split sleeve	Zirconia	









HIROSE ELECTRIC CO.,LTD.

5-23,OSAKI 5-CHOME,SHINAGAWA-KU,TOKYO 141-8587,JAPAN PHONE: 81-3-3491-9741, FAX: 81-3-3493-2933 http://www.hirose.com

http://www.hirose-connectors.com