

Table 2/G.957 – Parameters specified for STM-1 optical interfaces

	Unit	Values									
Digital signal		STM-1 according to ITU-T Rec. G.707/Y.1322									
Nominal bit rate	kbit/s	155 520									
Application code (Table 1)		I-1	S-1.1	S-1.2		L-1.1	L-1.2	L-1.3			
Operating wavelength range	nm	1260 ^{a)} -1360	1261 ^{a)} -1360	1430-1576	1430-1580	1263 ^{a)} -1360	1480-1580	1534-1566/ 1523-1577	1480-1580		
Transmitter at reference point S		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
Source type		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
Spectral characteristics:		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
– maximum RMS width (σ)	nm	40	80	7.7	2.5	–	3	–	–	3/2.5	–
– maximum –20 dB width	nm	–	–	–	–	1	–	1	–	–	1
– minimum side mode suppression ratio	dB	–	–	–	–	30	–	30	–	–	30
Mean launched power:		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
– maximum	dBm	–8	–8	–8	–8	–8	0	0	0	0	
– minimum	dBm	–15	–15	–15	–15	–15	–5	–5	–5	–5	
Minimum extinction ratio	dB	8.2	8.2	8.2	8.2	8.2	10	10	10	10	
Optical path between S and R		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
Attenuation range ^{b)}	dB	0-7	0-12	0-12	0-12	0-12	10-28	10-28	10-28	10-28	
Maximum dispersion	ps/nm	18 25	96	296 NA	296 NA	296 NA	246 NA	NA	246/296 NA	NA	
Minimum optical return loss of cable plant at S, including any connectors	dB	NA	NA	NA	NA	NA	NA	20	NA	NA	
Maximum discrete reflectance between S and R	dB	NA	NA	NA	NA	NA	NA	–25	NA	NA	
Receiver at reference point R		MLM LED		MLM	MLM	SLM	MLM SL M	SLM	MLM	SLM	
Minimum sensitivity ^{b)}	dBm	–23	–28	–28	–28	–28	–34	–34	–34	–34	
Minimum overload	dBm	–8	–8	–8	–8	–8	–10	–10	–10	–10	
Maximum optical path penalty	dB	1	1	1	1	1	1	1	1	1	
Maximum reflectance of receiver, measured at R	dB	NA	NA	NA	NA	NA	NA	–25	NA	NA	
^{a)} Some Administrations may require a limit of 1270 nm. ^{b)} See clause 6.											

Table 3/G.957 – Parameters specified for STM-4 optical interfaces

	Unit	Values						
Digital signal		STM-4 according to ITU-T Rec. G.707/Y.1322						
Nominal bit rate	kbit/s	622 080						
Application code (Table 1)		I-4	S-4.1	S-4.2	L-4.1		L-4.2	L-4.3
Operating wavelength range	nm	1261 ^{a)} -1360	1293-1334/ 1274-1356	1430-1580	1300-1325/ 1296-1330	1280-1335	1480-1580	1480-1580
Transmitter at reference point S								
Source type		MLM	LED	MLM	SLM	MLM	SLM	SLM
Spectral characteristics:								
– maximum RMS width (σ)	nm	14.5	35	4/2.5	–	2.0/1.7	–	–
– maximum –20 dB width	nm	–	–	–	1	–	1	< 1 ^{b)}
– minimum side mode suppression ratio	dB	–	–	–	30	–	30	30
Mean launched power:								
– maximum	dBm	–8	–8	–8	–8	+2	+2	+2
– minimum	dBm	–15	–15	–15	–15	–3	–3	–3
Minimum extinction ratio	dB	8.2	8.2	8.2	8.2	10	10	10
Optical path between S and R								
Attenuation range ^{b)}	dB	0-7	0-12	0-12	0-12	10-24	10-24	10-24
Maximum dispersion	ps/nm	13	14	46/74	NA	92/109	NA	1600
Minimum optical return loss of cable plant at S, including any connectors	dB	NA	NA	NA	24	20	24	20
Maximum discrete reflectance between S and R	dB	NA	NA	NA	–27	–25	–27	–25
Receiver at reference point R								
Minimum sensitivity ^{b)}	dBm	–23	–28	–28	–28	–28	–28	–28
Minimum overload	dBm	–8	–8	–8	–8	–8	–8	–8
Maximum optical path penalty	dB	1	1	1	1	1	1	1
Maximum reflectance of receiver, measured at R	dB	NA	NA	NA	–27	–14	–27	–14
^{a)} Some Administrations may require a limit of 1270 nm. ^{b)} See clause 6.								

Table 4/G.957 – Parameters specified for STM-16 optical interfaces

	Unit	Values					
Digital signal Nominal bit rate	kbit/s	STM-16 according to ITU-T Rec. G.707/Y.1322 2 488 320					
Application code (Table 1)		I-16	S-16.1	S-16.2	L-16.1	L-16.2	L-16.3
Operating wavelength range	nm	1266 ^{a)} -1360	1260 ^{a)} -1360	1430-1580	1280-1335	1500-1580	1500-1580
Transmitter at reference point S							
Source type		MLM	SLM	SLM	SLM	SLM	SLM
Spectral characteristics:							
– maximum RMS width (σ)	nm	4	–	–	–	–	–
– maximum –20 dB width	nm	–	1	< 1 ^{b)}	1	< 1 ^{b)}	< 1 ^{b)}
– minimum side mode – suppression ratio	dB	–	30	30	30	30	30
Mean launched power:							
– maximum	dBm	–3	0	0	+3	+3	+3
– minimum	dBm	–10	–5	–5	–2	–2	–2
Minimum extinction ratio	dB	8.2	8.2	8.2	8.2	8.2	8.2
Optical path between S and R							
Attenuation range ^{b)}	dB	0-7	0-12	0-12	12-24 ^{d)}	12-24 ^{d)}	12-24 ^{d)}
Maximum dispersion at upper wavelength limit	ps/nm	12 ^{c)}	NA	800 ^{c)}	NA	1600 ^{c)}	450 ^{c)}
Maximum dispersion at lower wavelength limit	ps/nm	12 ^{c)}	NA	420 ^{c)}	NA	1200 ^{c)}	450 ^{c)}
Minimum optical return loss of cable plant at S, including any connectors	dB	24	24	24	24	24	24
Maximum discrete reflectance between S and R	dB	–27	–27	–27	–27	–27	–27
Receiver at reference point R							
Minimum sensitivity ^{b)}	dBm	–18	–18	–18	–27	–28	–27
Minimum overload	dBm	–3	0	0	–9	–9	–9
Maximum optical path penalty	dB	1	1	1	1	2	1
Maximum reflectance of receiver, measured at R	dB	–27	–27	–27	–27	–27	–27
<p>^{a)} Some Administrations may require a limit of 1270 nm.</p> <p>^{b)} See clause 6.</p> <p>^{c)} For wavelengths between the upper and lower wavelength limits, the maximum dispersion is linearly interpolated between the values given for the wavelength extremes. Where the maximum dispersion values are the same, this value is required to be met across the entire wavelength range.</p> <p>^{d)} Some Administrations may require 10 dB minimum attenuation instead of 12 dB, to do this, it is required to decrease the maximum output power of the transmitter or to increase the minimum overload of the receiver (or a combination of both).</p>							