

Note to editor: these two tables are similar to 88-5.

Downstream channel wavelength assignments are defined in Table 0-1.

Table 0–1—Downstream channel wavelength assignments

Channel Name	Center frequency (THz)	Center wavelength (nm)	Wavelength range (nm)
DC0	220.7	1358.37	1356.87 to 1359.87
DC1	223.1	1343.76	1342.26 to 1345.26
DC2	224.3	1336.57	1335.07 to 1338.07
DC3	225.5	1329.46	1327.96 to 1330.96

Upstream channel wavelength assignments are defined in Table 0-2.

Table 0–2—Upstream channel wavelength assignments

Channel Name	Center frequency (THz)	Center wavelength (nm)	Wavelength range (nm)
UC0	TBD	TBD	TBD.UC0range
UC1	TBD	TBD	TBD.UC1range
UC2	TBD	TBD	TBD.UC2range
UC3	TBD	TBD	TBD.UC3range

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Note to editor: start of PR20 tables. These are similar to tables 88-7 and 88-8.

Table 0–3—OLT PR20 Transmit Characteristics

Parameter		25GBASE-PR20-D	50GBASE-PR20-D 50/25GBASE-PR20-D	100GBASE-PR20-D 100/50GBASE-PR20-D 100/25GBASE-PR20-D	Unit
		Channel wavelength ranges	DC0	1356.87 to 1359.87	
	DC1		1342.26 to 1345.26	1342.26 to 1345.26	nm
	DC2			1335.07 to 1338.07	nm
	DC3			1327.96 to 1330.96	nm
Signaling rate, (range)		25.78125 ± 100 ppm			GBd
Side-mode suppression ratio (SMSR), (min)		30			dB
Total average launch power (max)		14.3			dBm
Average launch power, each channel (max)		8.3			dBm
Average launch power, each channel ^a (min)		3.3			dBm
Optical Modulation Amplitude (OMA), each channel (max)		9.9			dBm
Optical Modulation Amplitude (OMA), each channel (min) ^b		4.9			dBm
Difference in launch power between any two channels (OMA) (max)		3			dB
Launch power in OMA minus TDP, each channel (min)		3.4			dBm
Transmitter and dispersion penalty (TDP), each channel (max)		1.5			dB
Average launch power of OFF transmitter, each channel (max)		−30			dBm
Extinction ratio (min)		8			dB
RIN _{15OMA} (max)		−130			dB/Hz
Optical return loss tolerance (max)		20			dB
Transmitter reflectance ^c (max)		−12			dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}		{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}			UI
Decision timing offset for transmitter and dispersion penalty		± 0.05			UI

^a Average launch power, each channel (min) is informative and not the principal indicator of signal strength. A transmitter with launch power below this value cannot be compliant; however, a value above this does not ensure compliance.

^b Even if the TDP < 1 dB, the OMA (min) must exceed this value.

^c Transmitter reflectance is defined looking into the transmitter.

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Table 0–4—OLT PR20 Receive Characteristics

Parameter		25GBASE-PR20-D	50GBASE-PR20-D	100GBASE-PR20-D	Unit
		50/25GBASE-PR20-D	100/50GBASE-PR20-D	100/25GBASE-PR20-D	
Channel wavelength ranges	UC0	TBD.UC0range	TBD.UC0range	TBD.UC0range	nm
	UC1		TBD.UC1range	TBD.UC1range	nm
	UC2			TBD.UC2range	nm
	UC3			TBD.UC3range	nm
Signaling rate, each channel (range)		25.78125 ± 100 ppm			GBd
Bit error ratio (max) ^a		10 ⁻³			
Damage Threshold ^b		-0.5			dBm
Average receive power, each channel (max)		-1.5			dBm
Average receive power, each channel ^c (min)		-21.5			dBm
Receive power, each channel (OMA) (max)		-0.7			dBm
Receiver reflectance (max)		-12			dB
Receiver sensitivity (OMA), each channel ^d (max)		-20.7			dBm
Signal detect threshold, each channel (min)		-44			GHz
Stressed receiver sensitivity (OMA), each channel ^e (max)		-19.2			dBm
Receiver settling time (max)		800			ns
Conditions of stressed receiver sensitivity test:					
Vertical eye closure penalty, ^f each channel		1.5			dB
Stressed eye J2 Jitter, ^e each channel		0.33			UI
Stressed eye J9 Jitter, ^e each channel		0.48			UI

^a The BER of 10⁻¹² is achieved by the utilization of FEC as described in XX.X.

^b The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

^c Average receive power, each channel (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

^d Receiver sensitivity (OMA), each channel (max) is informative.

^e Measured with conformance test signal at TP7 (see xx.xx.xx.xx) for BER = 10⁻³.

^f Vertical eye closure penalty, stressed eye J2 Jitter, and stressed eye J9 Jitter are test conditions for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

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Table 0-5—ONU PR20 Transmit Characteristics

Parameter	25GBASE-PR20-U		50GBASE-PR20-U		Unit
	50/25GBASE-PR20-U	100/25GBASE-PR20-U	100/50GBASE-PR20-U	100GBASE-PR20-U	
Channel wavelength ranges	UC0	TBD.UC0range	TBD.UC0range	TBD.UC0range	nm
	UC1		TBD.UC1range	TBD.UC1range	nm
	UC2			TBD.UC2range	nm
	UC3			TBD.UC3range	nm
Signaling rate, each channel (range)	25.78125 ± 100 ppm				GBd
Side-mode suppression ratio (SMSR), (min)	30				dB
Total average launch power (max)	15				dBm
Average launch power, each channel (max)	9				dBm
Average launch power, each channel ^a (min)	4				dBm
Optical Modulation Amplitude (OMA), each channel (max)	9.8				dBm
Optical Modulation Amplitude (OMA), each channel (min) ^b	4.8				dBm
Difference in launch power between any two channels (OMA) (max)	3				dB
Launch power in OMA minus TDP, each channel (min)	3.3				dBm
Transmitter and dispersion penalty (TDP), each channel (max)	1.5				dB
Average launch power of OFF transmitter, each channel (max)	-30				dBm
Extinction ratio (min)	6				dB
RIN ₁₅ OMA (max)	-130				dB/Hz
Optical return loss tolerance (max)	20				dB
Transmitter reflectance ^c (max)	-12				dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}	{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}				UI
Turn-on time (max)	512				ns
Turn-off time (max)	512				ns
Decision timing offset for transmitter and dispersion penalty	± 0.0625				UI

^a Average launch power, each channel (min) is informative and not the principal indicator of signal strength. A transmitter with launch power below this value cannot be compliant; however, a value above this does not ensure compliance.

^b Even if the TDP < 1 dB, the OMA (min) must exceed this value.

^c Transmitter reflectance is defined looking into the transmitter.

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Table 0–6—ONU PR20 Receive Characteristics

Parameter		25GBASE-PR20-U	50GBASE-PR20-U 50/25GBASE-PR20-U	100GBASE-PR20-U 100/50GBASE-PR20-U 100/25GBASE-PR20-U	Unit
		Channel wavelength ranges	DC0	1356.87 to 1359.87	
	DC1		1342.26 to 1345.26	1342.26 to 1345.26	nm
	DC2			1335.07 to 1338.07	nm
	DC3			1327.96 to 1330.96	nm
Signaling rate, each channel (range)		25.78125 ± 100 ppm			GBd
Bit error ratio (max) ^a		10 ⁻³			
Damage Threshold ^b		-0.7			dBm
Average receive power, each channel (max)		-1.7			dBm
Average receive power, each channel ^c (min)		-22.2			dBm
Receive power, each channel (OMA) (max)		-0.1			dBm
Receiver reflectance (max)		-12			dB
Receiver sensitivity (OMA), each channel ^d (max)		-20.6			dBm
Detect threshold, each channel (min)		-44			dBm
Stressed receiver sensitivity (OMA), each channel ^e (max)		-19.1			dBm
Conditions of stressed receiver sensitivity test					
Vertical eye closure penalty, ^f each channel		1.5			dB
Stressed eye J2 Jitter, ^e each channel		0.33			UI
Stressed eye J9 Jitter, ^e each channel		0.48			UI

^a The BER of 10⁻¹² is achieved by the utilization of FEC as described in xx.xx.xx.xx.

^b The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

^c Average receive power, each channel (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

^d Receiver sensitivity (OMA), each channel (max) is informative.

^e Measured with conformance test signal at TP3 (see xx.xx.xx.xx) for BER = 10⁻³.

^f Vertical eye closure penalty, stressed eye J2 Jitter, and stressed eye J9 Jitter are test conditions for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

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Note to editor: start of PR30 tables. These are similar to tables 88-7 and 88-8.

Table 0–7—OLT PR30 Transmit Characteristics

Parameter		25GBASE-PR30-D	50GBASE-PR30-D 50/25GBASE-PR30-D	100GBASE-PR30-D 100/50GBASE-PR30-D 100/25GBASE-PR30-D	Unit
		Channel wavelength ranges	DC0	1356.87 to 1359.87	
	DC1		1342.26 to 1345.26	1342.26 to 1345.26	nm
	DC2			1335.07 to 1338.07	nm
	DC3			1327.96 to 1330.96	nm
Signaling rate, each channel (range)		25.78125 ± 100 ppm			GBd
Side-mode suppression ratio (SMSR), (min)		30			dB
Total average launch power (max)		17.3		19.3	dBm
Average launch power, each channel (max)		11.3		13.3	dBm
Average launch power, each channel ^a (min)		6.3		8.3	dBm
Optical Modulation Amplitude (OMA), each channel (max)		12.9		14.9	dBm
Optical Modulation Amplitude (OMA), each channel (min) ^b		7.9		9.9	dBm
Difference in launch power between any two channels (OMA) (max)		3			dB
Launch power in OMA minus TDP, each channel (min)		6.4		8.4	dBm
Transmitter and dispersion penalty (TDP), each channel (max)		1.5			dB
Average launch power of OFF transmitter, each channel (max)		-30			dBm
Extinction ratio (min)		8			dB
RIN _{15OMA} (max)		-130			dB/Hz
Optical return loss tolerance (max)		20			dB
Transmitter reflectance ^c (max)		-12			dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}		{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}			UI
Decision timing offset for transmitter and dispersion penalty		± 0.05			UI

^a Average launch power, each channel (min) is informative and not the principal indicator of signal strength. A transmitter with launch power below this value cannot be compliant; however, a value above this does not ensure compliance.

^b Even if the TDP < 1 dB, the OMA (min) must exceed this value.

^c Transmitter reflectance is defined looking into the transmitter.

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Table 0–8—OLT PR30 Receive Characteristics

Parameter		25GBASE-PR30-D	50GBASE-PR30-D	100GBASE-PR30-D	Unit
		50/25GBASE-PR30-D	100/50GBASE-PR30-D		
Channel wavelength ranges	UC0	TBD.UC0range	TBD.UC0range	TBD.UC0range	nm
	UC1		TBD.UC1range	TBD.UC1range	nm
	UC2			TBD.UC2range	nm
	UC3			TBD.UC3range	nm
Signaling rate, each channel (range)		25.78125 ± 100 ppm			GBd
Bit error ratio (max) ^a		10 ⁻³			
Damage Threshold ^b		-2	-3.5		dBm
Average receive power, each channel (max)		-3	-4.5		dBm
Average receive power, each channel ^c (min)		-23.5	-25		dBm
Receive power, each channel (OMA) (max)		-2.2	-3.7		dBm
Receiver reflectance (max)		-12			dB
Receiver sensitivity (OMA), each channel ^d (max)		-22.7	-24.2		dBm
Signal detect threshold, each channel (min)		-44			GHz
Stressed receiver sensitivity (OMA), each channel ^e (max)		-21.2	-22.7		dBm
Receiver settling time (max)		800			ns
Conditions of stressed receiver sensitivity test:					
Vertical eye closure penalty, ^f each channel		1.5			dB
Stressed eye J2 Jitter, ^e each channel		0.33			UI
Stressed eye J9 Jitter, ^e each channel		0.48			UI

^a The BER of 10⁻¹² is achieved by the utilization of FEC as described in XX.X.

^b The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

^c Average receive power, each channel (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

^d Receiver sensitivity (OMA), each channel (max) is informative.

^e Measured with conformance test signal at TP7 (see xx.xx.xx.xx) for BER = 10⁻³.

^f Vertical eye closure penalty, stressed eye J2 Jitter, and stressed eye J9 Jitter are test conditions for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

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Table 0-9—ONU PR30 Transmit Characteristics

Parameter	25GBASE-PR30-U 50/25GBASE-PR30-U 100/25GBASE-PR30-U			50GBASE-PR30-U 100/50GBASE-PR30-U		100GBASE-PR30-U	Unit
	UC0	TBD.UC0range	TBD.UC0range	TBD.UC1range	TBD.UC1range	TBD.UC2range	
Channel wavelength ranges	UC0	TBD.UC0range	TBD.UC0range	TBD.UC1range	TBD.UC1range	TBD.UC2range	nm
	UC1			TBD.UC1range	TBD.UC1range		nm
	UC2					TBD.UC2range	nm
	UC3					TBD.UC3range	nm
Signaling rate, each channel (range)	25.78125 ± 100 ppm						GBd
Side-mode suppression ratio (SMSR), (min)	30						dB
Total average launch power (max)	18	16.5					dBm
Average launch power, each channel (max)	12	10.5					dBm
Average launch power, each channel ^a (min)	7	5.5					dBm
Optical Modulation Amplitude (OMA), each channel (max)	12.8	11.3					dBm
Optical Modulation Amplitude (OMA), each channel (min) ^b	7.8	6.3					dBm
Difference in launch power between any two channels (OMA) (max)	3						dB
Launch power in OMA minus TDP, each channel (min)	6.3	4.8					dBm
Transmitter and dispersion penalty (TDP), each channel (max)	1.5						dB
Average launch power of OFF transmitter, each channel (max)	-30						dBm
Extinction ratio (min)	6						dB
RIN ₁₅ OMA (max)	-130						dB/Hz
Optical return loss tolerance (max)	20						dB
Transmitter reflectance ^c (max)	-12						dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}	{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}						UI
Turn-on time (max)	512						ns
Turn-off time (max)	512						ns
Decision timing offset for transmitter and dispersion penalty	± 0.0625						UI

^a Average launch power, each channel (min) is informative and not the principal indicator of signal strength. A transmitter with launch power below this value cannot be compliant; however, a value above this does not ensure compliance.

^b Even if the TDP < 1 dB, the OMA (min) must exceed this value.

^c Transmitter reflectance is defined looking into the transmitter.

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Table 0–10—ONU PR30 Receive Characteristics

Parameter	25GBASE-PR30-U		50GBASE-PR30-U	100GBASE-PR30-U	Unit
			50/25GBASE-PR30-U	100/50GBASE-PR30-U 100/25GBASE-PR30-U	
Channel wavelength ranges	DC0	1356.87 to 1359.87	1356.87 to 1359.87	1356.87 to 1359.87	nm
	DC1		1342.26 to 1345.26	1342.26 to 1345.26	nm
	DC2			1335.07 to 1338.07	nm
	DC3			1327.96 to 1330.96	nm
Signaling rate, each channel (range)	25.78125 ± 100 ppm				GBd
Bit error ratio (max) ^a	10 ⁻³				
Damage Threshold ^b	-0.7		0.3		dBm
Average receive power, each channel (max)	-1.7		-0.7		dBm
Average receive power, each channel ^c (min)	-24.2		-22.2		dBm
Receive power, each channel (OMA) (max)	-0.1		0.9		dBm
Receiver reflectance (max)	-12				dB
Receiver sensitivity (OMA), each channel ^d (max)	-22.6		-20.6		dBm
Detect threshold, each channel (min)	-44				dBm
Stressed receiver sensitivity (OMA), each channel ^e (max)	-21.1		-19.1		dBm
Conditions of stressed receiver sensitivity test					
Vertical eye closure penalty, ^f each channel	1.5				dB
Stressed eye J2 Jitter, ^e each channel	0.33				UI
Stressed eye J9 Jitter, ^e each channel	0.48				UI

^a The BER of 10⁻¹² is achieved by the utilization of FEC as described in xx.xx.xx.xx.

^b The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

^c Average receive power, each channel (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

^d Receiver sensitivity (OMA), each channel (max) is informative.

^e Measured with conformance test signal at TP3 (see xx.xx.xx.xx) for BER = 10⁻³.

^f Vertical eye closure penalty, stressed eye J2 Jitter, and stressed eye J9 Jitter are test conditions for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

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