Cl **200** *SC* **200.5.4** *P* **29** *L* **6** # 21

traverso, matt cisco

Comment Type **T** *Comment Status* **D**

The average optical power at TP3 for SIGNAL_DETECT is too low (currently <= -30 dBm) in Table 200-4. This limits the capability of multi-interface 25GBASE-LR or 25GBASE-ER transmitters which can utilize a shared light source split across multiple transmitters.

SuggestedRemedy

Suggest to change threshold to -25 dBm in Table 200-4

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **30** # 34

Lee, Hanhyub ETRI

Comment Type **E** *Comment Status* **D**

Similar sentences are repeated.

SuggestedRemedy

The 25GBASE-LR and the 25GBASE-ER transmitter shall meet the specifications defined in Table 200–6 per the definitions in 200.7.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **45** # 22

traverso, matt cisco

Comment Type **T** *Comment Status* **D**

In Table 200-6, the "Average launch power (min)" is currently -7 dBm for 25GBASE-LR. The parameter governing minimum transmitter strength is of course the OMA (min). In order for the average power to be -7 dBm while still complying to the OMA (min) of -4 dBm would necessitate a 30 dB Extinction Ratio transmitter. This is unrealistic.

SuggestedRemedy

I suggest updating the informative value for 25GBASE-LR "Average launch power (min)" to be -6.6 dBm which corresponds to a >13.25 dB ER.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **45** # 23

traverso, matt cisco

Comment Type **T** *Comment Status* **D**

In Table 200-6, the "Average launch power (min)" is currently -1.6 dBm for 25GBASE-ER. The parameter governing minimum transmitter strength is of course the OMA (min). In order for the average power to be -1.6 dBm while still complying to the OMA (min) of -4 dBm would necessitate a 30 dB Extinction Ratio transmitter. This is unrealistic.

SuggestedRemedy

I suggest updating the informative value for 25GBASE-ER "Average launch power (min)" to be -1.2 dBm which corresponds to a >13.25 dB ER.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **46** # 36

Lewis, David Lumentum

Comment Type **T** *Comment Status* **D**

We need to align the 25GBASE-ER transmit characteristics in Table 200-6 with the industry choice of link budget expressed in ITU-T G.959.1. The ITU-T Minimum mean channel output power is 0.6 dBm. With a minimum extinction ratio of 7 dB, this equates to a minimum OMA of 1.85 dBm. In the ITU-T methodology this launch power allows for the worst case transmitter quality so is equivalent to the IEEE parameter OMA (min) for maximum TDP. Since TDP (max) = 2.7 dB for 25GBASE-ER, we should set Launch power in OMA minus TDP at (1.85 - 2.7) = -0.85 dBm or lower.

SuggestedRemedy

Change Average launch power (min) from -1.6 to -3 dBm.
Change Optical Modulation Amplitude (OMA), (min) from 1.4 to 0 dBm.
Change Launch Power in OMA minus TDP (min) from 0.4 to -1 dBm.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **47** # 25

Huang, Xi Huawei Technologies

Comment Type **TR** *Comment Status* **D**

we suggest to change average launch power(min) for 25GBASE-ER from -1.6 to -0.2 dBm. Please see the proposal for explanations

SuggestedRemedy

-0.2

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **50** # 26

Huang, Xi — Huawei Technologies

Comment Type **TR** *Comment Status* **D**

we suggest to change Optical Modulation Amplitude(OMA) (min) for 25GBASE-ER from -1.4 to 2.8 dBm. Please see the proposal for explanations

SuggestedRemedy

2.8

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **30** *L* **52** # 27

Huang, Xi — Huawei Technologies

Comment Type **TR** *Comment Status* **D**

we suggest to change Optical Modulation Amplitude minus TDP (min) for 25GBASE-ER from -0.4 to 1.8 dBm. Please see the proposal for explanations

SuggestedRemedy

1.8

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.1** *P* **31** *L* **7** # 20

traverso, matt — cisco

Comment Type **T** *Comment Status* **D**

The "Average launch power of OFF transmitter (max)" of -30 dBm in Table 200-6 is too low. This limits the capability of multi-interface 25GBASE-LR or 25GBASE-ER transmitters which can utilize a shared light source split across multiple transmitters.

SuggestedRemedy

Suggest to change "Average launch power of OFF transmitter (max)" to -25 dBm in Table 200-6

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **6** # 35

Lee, Hanhyub — ETRI

Comment Type **E** *Comment Status* **D**

Similar sentences are repeated.

SuggestedRemedy

The 25GBASE-LR and the 25GBASE-ER receiver shall meet the specifications defined in Table 200–7 per the definitions in 200.7.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **19** # 39

Lewis, David — Lumentum

Comment Type **T** *Comment Status* **D**

In Table 200-7, Damage threshold (min) is TBD for 25GBASE-ER. Previous PMDs have adopted the method of setting damage threshold (min) at 1 dB higher than the maximum average power at the receiver. Since we have a minimum channel insertion loss of 11 dB for 25GBASE-ER, Average receive power (max) is set at -5 dBm, so the damage threshold should be set at -4 dBm or higher.

SuggestedRemedy

Change Damage threshold (min) from TBD to -4 dBm.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **19** # 24

traverso, matt — cisco

Comment Type **T** *Comment Status* **D**

There is a TBD for the 25GBASE-ER receiver "Damage Threshold (min)" in Table 200-7.

SuggestedRemedy

Given there is a likelihood to use an APD for the 25GBASE-ER application, I suggest making the "Channel insertion loss (min)" a value of 10dB to be inline with common attenuator values. This would then require that the "Damage Threshold (min)" be shifted to -4 dBm in Table 200-7. Also, suggest to update in Table 200-8 and Table 200-12, the "Channel insertion loss (min)" to a value of 10 dB for 25GBASE-ER.

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **23** # 28

Huang, Xi — Huawei Technologies

Comment Type **TR** *Comment Status* **D**

we suggest to change Average receive power (min) for 25GBASE-ER from -19.6 to -18.2dBm. Please see the proposal for explanations

SuggestedRemedy

-18.2

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **23** # 37

Lewis, David — Lumentum

Comment Type **T** *Comment Status* **D**

We need to align the 25GBASE-ER receive characteristics in Table 200-7 with the industry choice of link budget expressed in ITU-T G.959.1. The ITU-T spec has equivalent sensitivity of of -18.9 dBm (average power) with min ER= 7 dB, which equates to OMA sensitivity of -17.65 dBm. However in the ITU-T methodology this is measured back-to-back with a worst case compliant transmitter. For 25GBASE-ER the informative value of Receiver sensitivity (OMA), (max) is measured back-to-back with a high quality reference transmitter and so should be lower than the ITU-T equivalent sensitivity.

SuggestedRemedy

Change
Average receive power (min) from -19.6 to -21 dBm
Receiver sensitivity (OMA), (max) from -17.6 to -19 dBm

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **28** # 29

Huang, Xi — Huawei Technologies

Comment Type **TR** *Comment Status* **D**

we suggest to change Receiver sensitivity (OMA), max for 25GBASE-ER from -17.6 to -16.2dBm. Please see the proposal for explanations

SuggestedRemedy

-16.2

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **30** # 38

Lewis, David — Lumentum

Comment Type **T** *Comment Status* **D**

The Stressed receiver sensitivity (OMA), (max) and the Conditions of stressed receiver test are currently TBD for 25GBASE-ER. This comment proposes a set of values based on modeling of a worst case transmitter with TDP of 2.7 dB and with a worst case 40 km channel at a center wavelength of 1295 nm.

SuggestedRemedy

Change
Stressed receiver sensitivity (OMA), (max) from TBD to -16.5 dBm
Vertical eye closure penalty from TBD to 1.9 dB
Stressed eye J2 Jitter from TBD to 0.27 UI
Stressed eye J4 Jitter from TBD to 0.39 UI
SRS eye mask definition from TBD to {0.24,0.5,0.5,0.24,0.24,0.4}

Proposed Response *Response Status* **W**

Cl **200** *SC* **200.6.2** *P* **32** *L* **33** # 40

Lewis, David — Lumentum

Comment Type **T** *Comment Status* **D**

In Table 200-7, the value for Vertical eye closure penalty for 25GBASE-LR is -1.9 dB. The convention for previous PMDs has been to express VECP as a positive number.

SuggestedRemedy

Change Vertical eye closure penalty for 25GBASE-LR from -1.9 to 1.9 dB.

Proposed Response *Response Status* **W**

Cl **TOC** *SC* **TOC** *P* **12** *L* **36** # 30

Lee, Hanhyub — ETRI

Comment Type **E** *Comment Status* **D**

Typo of RIN20OMA

SuggestedRemedy

Correct '20' as subscript of RIN

Proposed Response *Response Status* **W**

Cl **TOC** *SC* **TOC** *P* **12** *L* **39** # 31

Lee, Hanhyub ETRI

Comment Type **E** *Comment Status* **D**

A spacing must be between a clause number and a clause title

SuggestedRemedy

200.7.10 Stressed receiver sensitivity

Proposed Response *Response Status* **W**

Cl **TOC** *SC* **TOC** *P* **12** *L* **45** # 32

Lee, Hanhyub ETRI

Comment Type **E** *Comment Status* **D**

A spacing must be between a clause number and a clause title

SuggestedRemedy

200.11.1 Introduction
200.11.2 Identification

Proposed Response *Response Status* **W**

Cl **TOC** *SC* **TOC** *P* **12** *L* **49** # 33

Lee, Hanhyub ETRI

Comment Type **E** *Comment Status* **D**

A spacing must be between a clause number and a clause title

SuggestedRemedy

200.11.3 Major capabilities/options
200.11. 4 PICS proforma tables for Physical Medium Dependent (PMD) sublayer and medium, types 25GBASE-LR and 25GBASE-ER

Proposed Response *Response Status* **W**