Extend 100GBASE-SR4 Wavelength to 980 nm

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100GBASE-SR10

- 10G GaAs/AlGaAs VCSEL Array
- Wavelength: 840 nm – 860 nm
- Spectral width: 0.65 nm
- Receiver Technology: GaAs PIN
100GBASE-SR4 Transmitter

- 4 x 25 Gb/s VCSEL Technology
- Active layer strain of InGaAs/GaAs VCSEL contributes to larger differential gain and higher operation bandwidth
- Better reliability of InGaAs/GaAs VCSEL due to lower current density and Indium element
- Wavelength of InGaAs/GaAs VCSEL at 950 nm – 980 nm
25 Gb/s Receiver Technology for 100GBASE-SR4
--- Responsivity

Equivalent to GaAs PIN
25 Gb/s Receiver Technology for 100GBASE-SR4

---- S21 Characteristics

Analog BW >20GHz → 25Gbps Digital Data Rate
Proposal

• Extend the 100GBASE-SR4 wavelength to include 950 – 980 nm
• Receiver technology to cover from 840 nm to 980 nm, thus compatible to both 850 nm GaAs and 980 nm InGaAs VCSELs
• Cost competitive to conventional GaAs PIN technology