

tuning threshold. With clever choice of cavity length, the short-wavelength and long-wavelength tuning ends are optimized under injection current even slightly above the threshold current of solitary device. We also propose the strategy to further extend the tuning wavelength without sacrificing its tuning threshold. It can be easily implemented by the epitaxial growth design through optimization of QD-stacks of three or more chirped wavelengths, each with separate number of stacking layers.

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