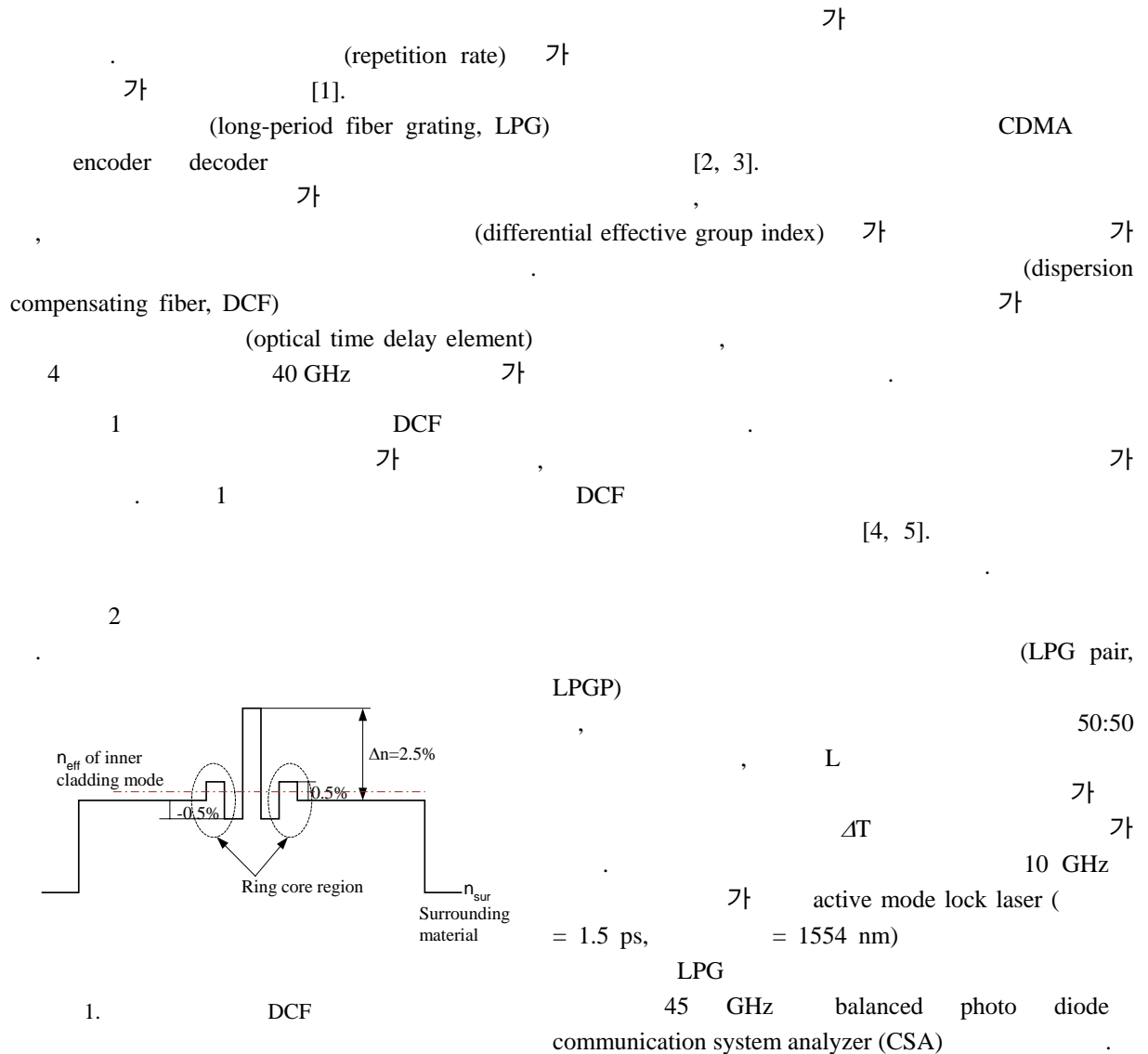


Optical pulse repetition rate multiplication by using cascaded long-period fiber gratings with dispersion compensating fiber

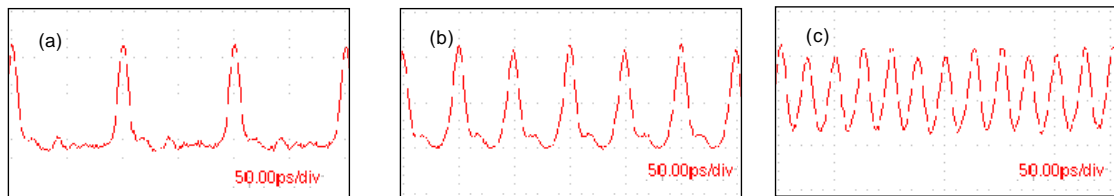
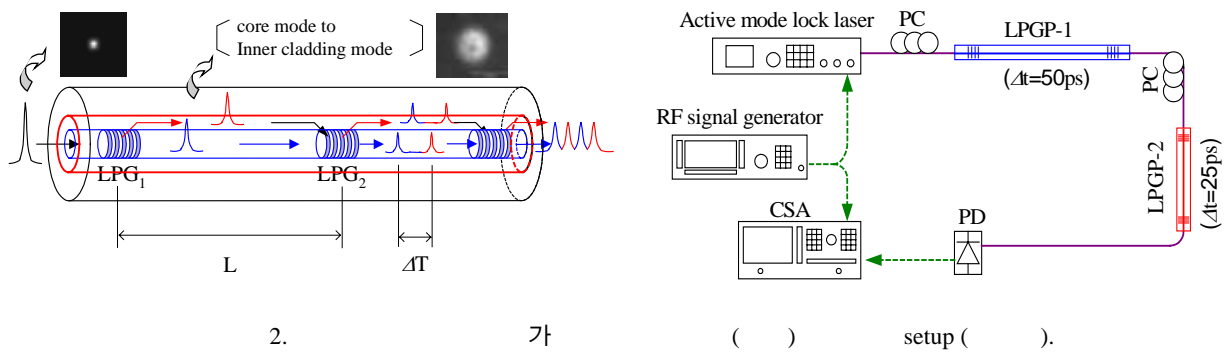
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Abstract: Optical pulse repetition rate multiplication was implemented by utilizing the propagation speed difference between the core mode and a co-propagating inner cladding mode that was not sensitive to the change on the cladding surface. Cascaded long-period fiber gratings imprinted along a dispersion compensating fiber supported a inner cladding mode and enabled to get a 40 GHz repetition rate pulse train from a 10 GHz pulse train without distorting the individual pulse features.



Krf
 780 μm 10 mm
 (1554 nm) 3 dB 가
 250.0 mm
 (10.998x10⁻³) 가
 (LPGP₁ = 1363.9 mm, LPGP₂ = 682.0 mm) 3
 (LPGP₁)
 50 ps, 20 GHz ,
 25 ps 40 GHz (LPGP₂)
 DCF 4
 10GHz 40GHz 가
 (100 GHz) CDMA



3. (a) 가 (10 GHz), (b) 가 가 (20 GHz , $\Delta T = 50$ ps),
 (c) 가 가 (40 GHz, $\Delta T = 25$ ps).

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