

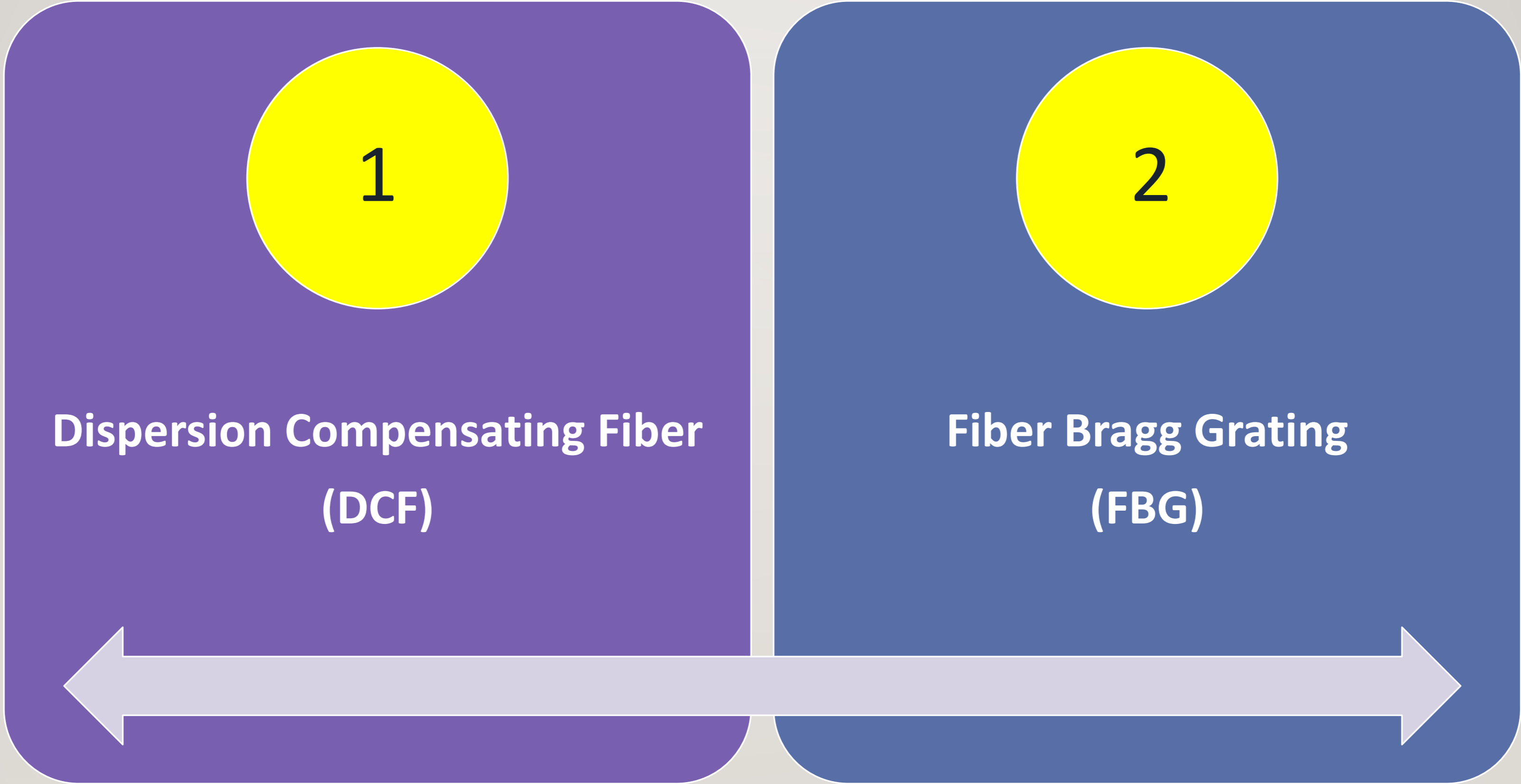
SISTEM KOMUNIKASI OPTIK

- **MATERI 5**
- **KOMPESATOR DISPERSI**

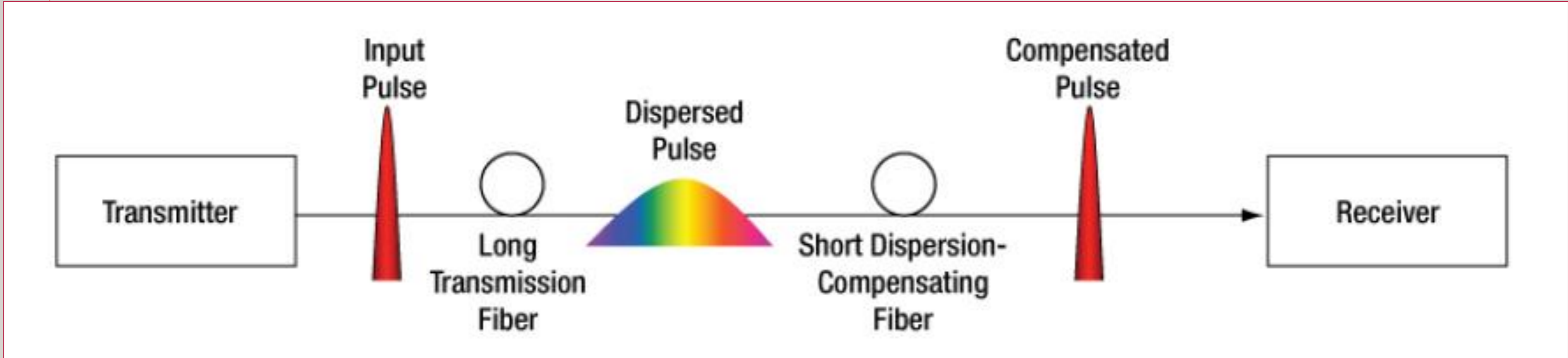
- D3 Teknologi Telekomunikasi – Fakultas Ilmu Terapan



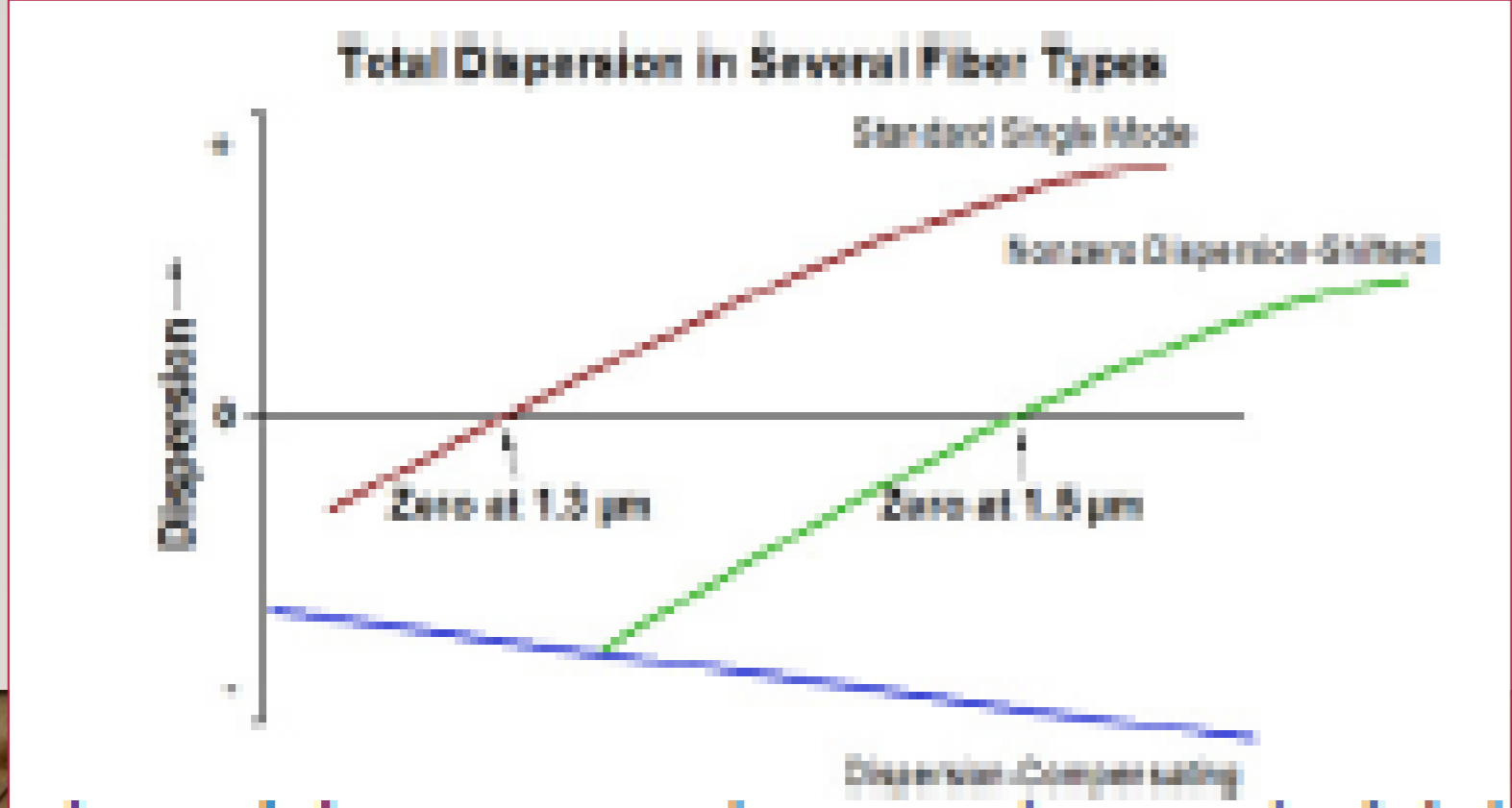
KOMPESATOR DISPERSI



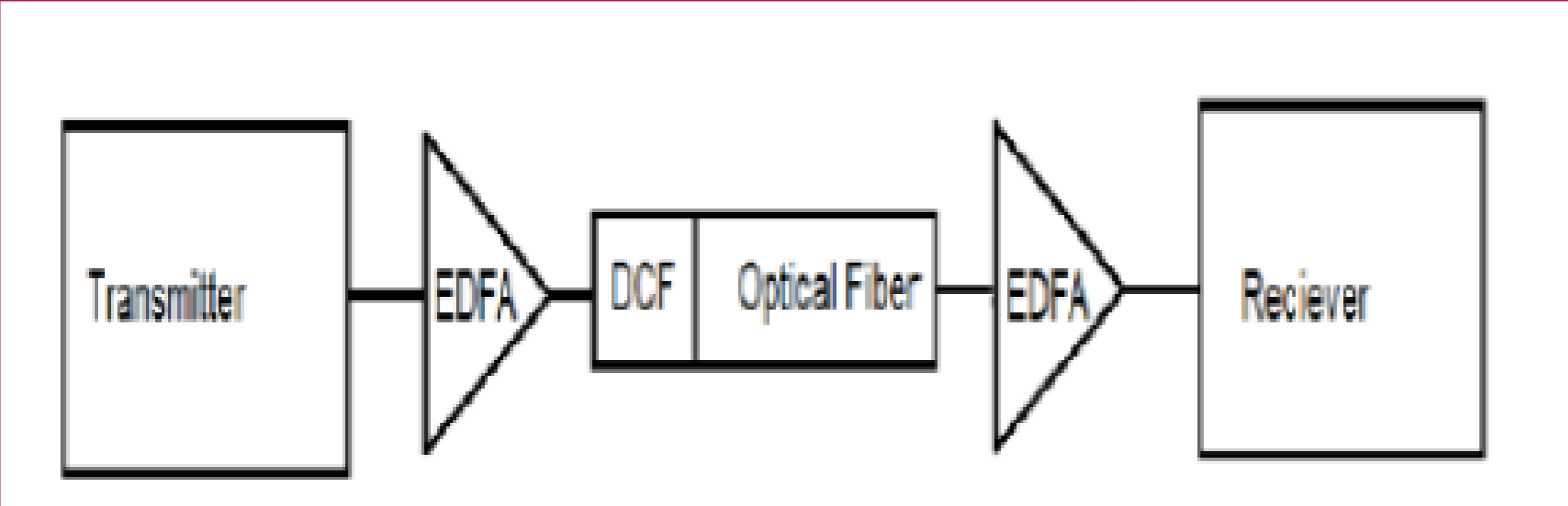
DISPERSION COMPENSATING FIBER (DCF)



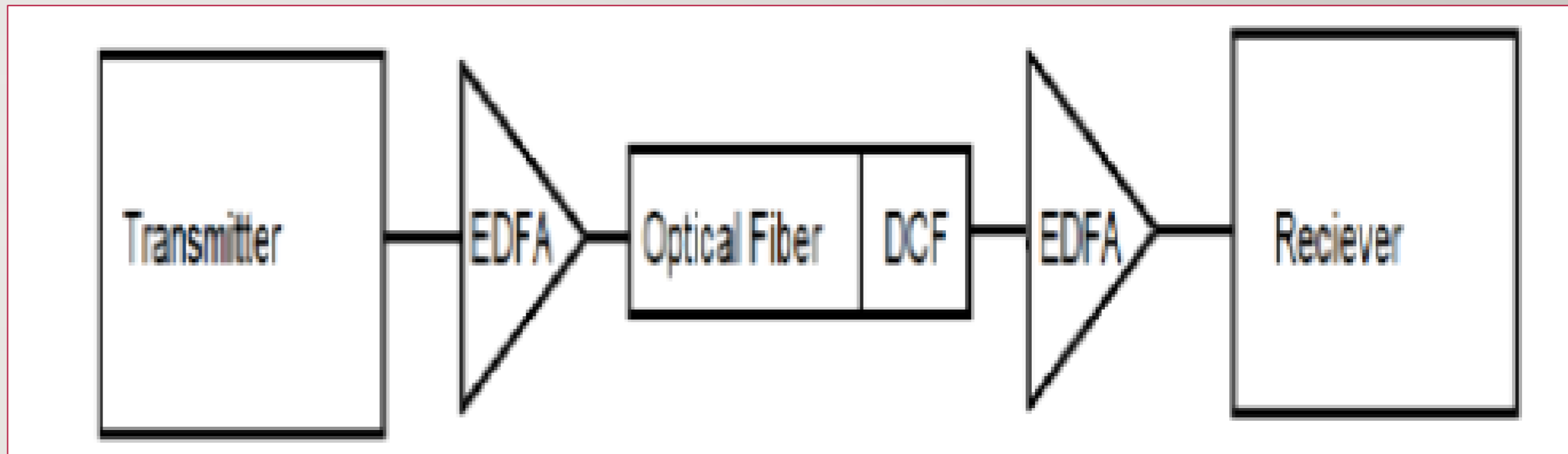
Gambar 1. Link Sistem Komunikasi Optik Menggunakan DCF



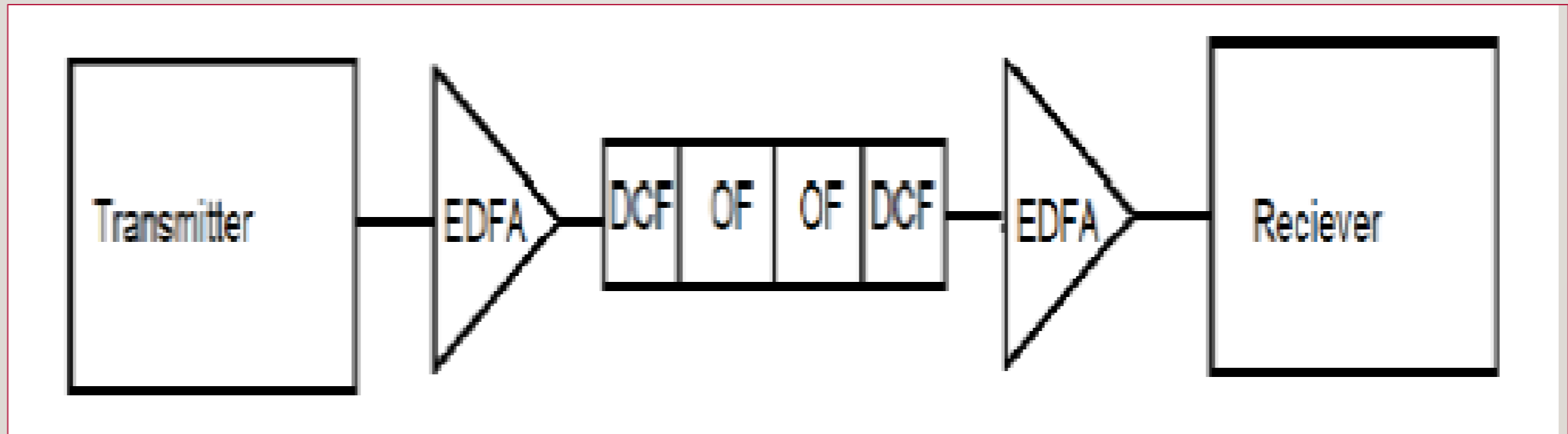
DISPERSION COMPENSATING FIBER (DCF)



Gambar 1. Pre- Compensation

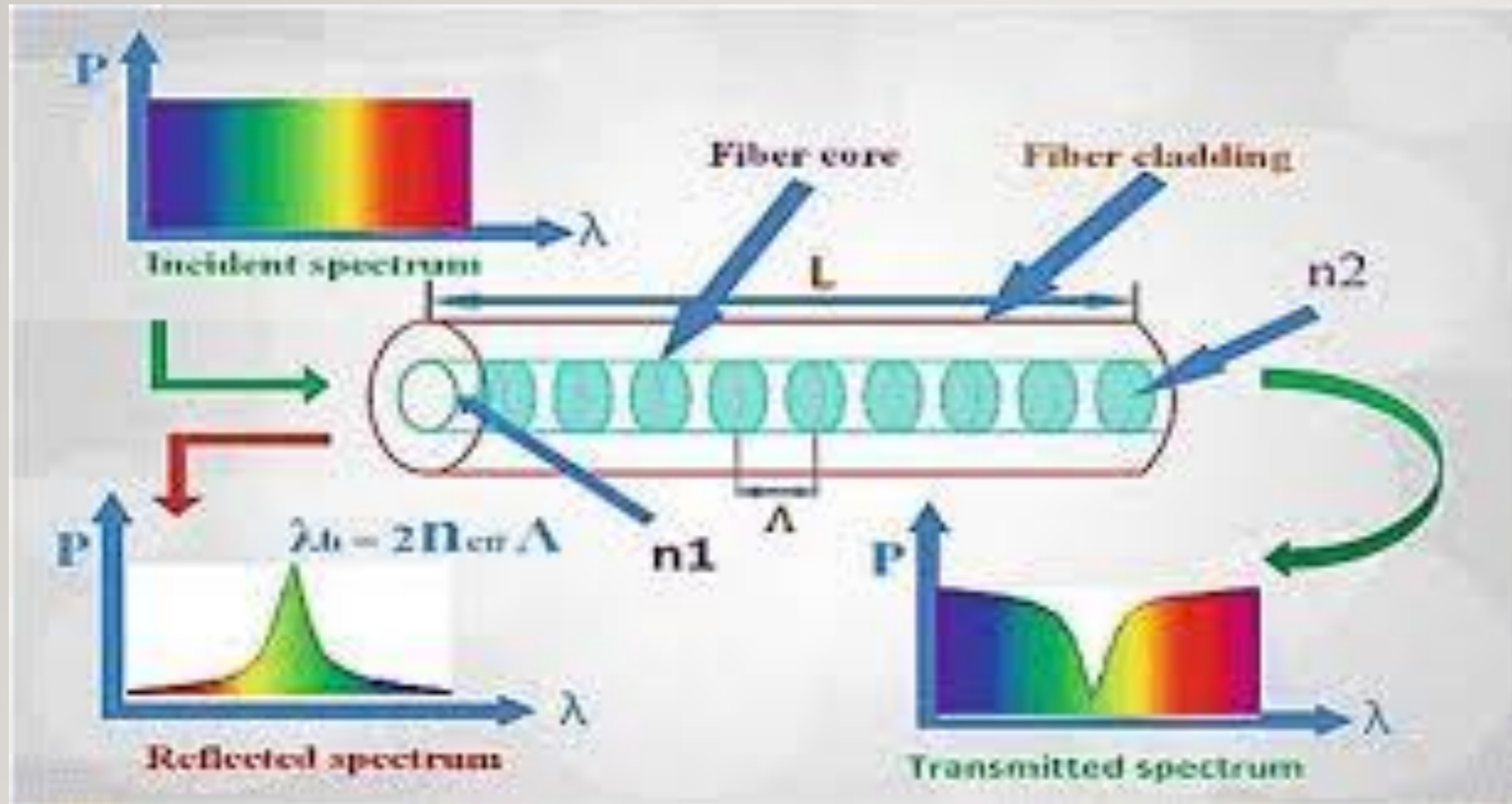


Gambar 2. Post- Compensation



Gambar 3. Symmetric Compensation

FIBER BRAGG GRATING (FBG)



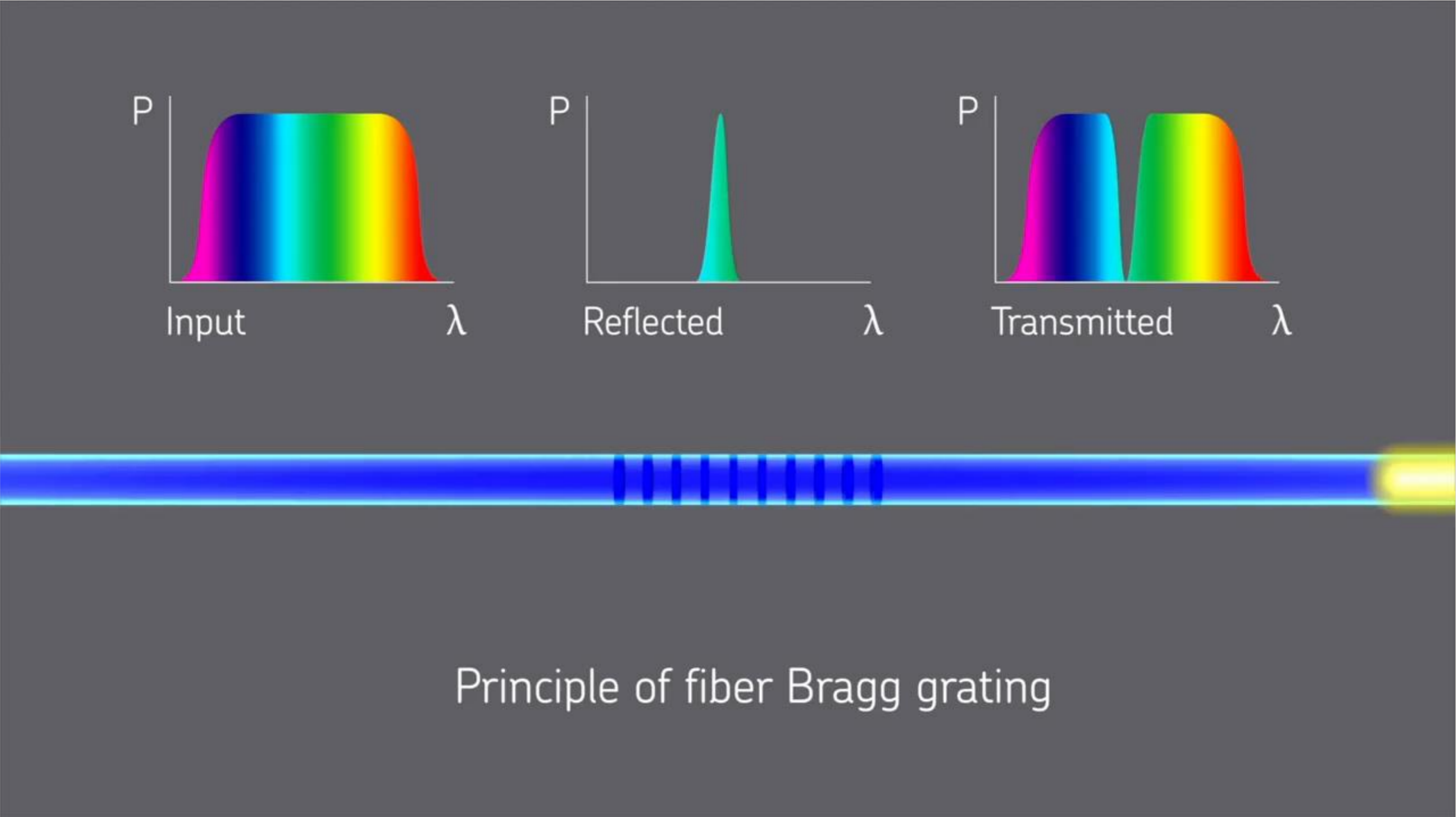
$$\lambda_{bragg} = 2 n_{eff} \cdot \Delta$$

n_{eff} = indeks refraktif rata rata

Δ = Periode Grating

Gambar 1. Prinsip Kerja FBG Sebagai Kompesator

FIBER BRAGG GRATING (FBG)



Principle of fiber Bragg grating

Kelebihan FBG

- Ukurannya kecil dan sederhana
- Tahan terhadap interferensi elektromagnetik
- refleksi dan pemfilteran dan insertion loss yang kecil
- Respon spektrum dari FBG

Kekurangan FBG

- dibutuhkan recover sinyal refleksi
- loss transmisi tambahan



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