

Reflecting Bragg Gratings (RBG)

Parameter	Range of parameter change	Notes
Main grating parameters		
Type of a grating	RBG	
Resonant wavelength WL (nm)	400 ÷ 2700	Peak (central) wavelength
Diffraction efficiency DE $=I_d/(I_r+I_t)$ (%)	0 ÷ 99.99	Relative DE defined for plane monochromatic wave
Additional grating parameters		
Incident angle IA (θ_i , deg)	-90 ÷ +90	In air
Exit angle EA (θ_d , deg)	+90 ÷ -90	In air
Thickness T (mm)	0.5 ÷ 20	
Width W (mm)	1 ÷ 35	
Height H (mm)	1 ÷ 35	
Antireflection coating AR (if not specified – uncoated U)	R<0.25% per surface for BB R<0.1% per surface for NB	Either broadband (BB) or narrowband (NB)
Reference Parameters		
Grating losses GL $= (I_r+I_t-I_i)/I_i$ (%)	0.1 ÷ 10	< 10% for uncoated (U) gratings; < 2.5% for gratings with AR coating
Angular selectivity AS ($\delta\theta$, mrad)	0.5 ÷ 100	Full Width at Half Maximum (FWHM)
Spectral selectivity WS ($\delta\lambda$, nm)	0.01 ÷ 20	Full Width at Half Maximum (FWHM)
Grating period d (Λ , μm)	0.13 ÷ 1.0	
Refractive index modulation RIM (δn , ppm)	50 ÷ 1200	Amplitude of sinusoidal modulation
Grating slant angle in a glass wafer SL (φ , deg)	-42 ÷ +42	Inside the grating medium