

Explanation of Filter Specifications

1 Wavelength (λ_{spec})

The specified filter wavelength, in nanometers.

2 Wavelength Tolerance (λ_{tol})

The allowed wavelength tolerance of the part, in nanometers, such that the following is true for all positions on the filter:

$$\begin{aligned} \lambda_{max} &< \lambda_{spec} + \lambda_{tol} \\ \lambda_{min} &> \lambda_{spec} - \lambda_{tol} \end{aligned}$$

3 Maximum Wavelength Variation ($\Delta \lambda$)

The maximum allowed spatial variation of wavelength, in nanometers, within a single filter defined as $\Delta \lambda = \lambda_{max} - \lambda_{min}$.

4 External Diffraction Efficiency (E_{spec})

The specified external diffraction efficiency, in percent.

5 External Diffraction Efficiency Tolerance (E_{tol})

The allowed external diffraction efficiency tolerance of the part, in percent, such that the following is true for all positions on the filter:

$$\begin{aligned} E_{max} &< E_{spec} + E_{tol} \\ E_{min} &> E_{spec} - E_{tol} \end{aligned}$$

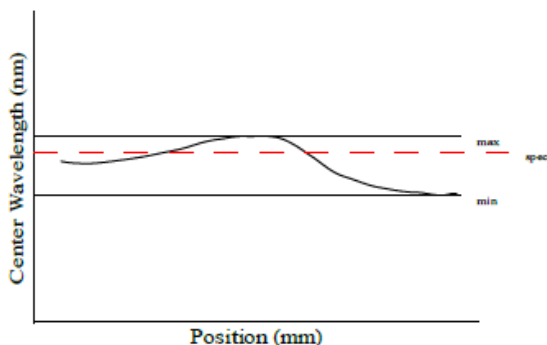


Figure 1: A representative plot of filter center wavelength for normal incidence versus position within a filter.

6 Maximum External Diffraction Efficiency Variation (ΔE)

The maximum allowed spatial variation of external diffraction efficiency within a single filter, in percent, defined as $\Delta E = E_{max} - E_{min}$.

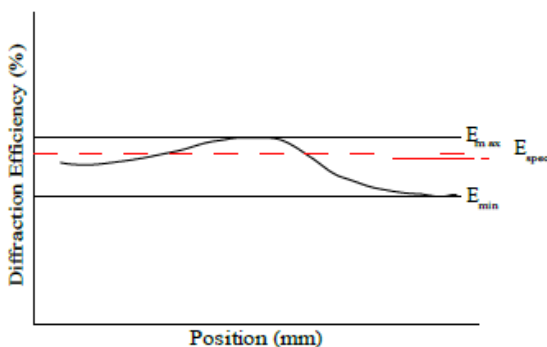


Figure 2: A representative plot of diffraction efficiency versus position within a filter.