



Pellicle Beamsplitters

A pellicle beamsplitter is a high tensile strength elastic membrane, stretched like a drumhead over a black anodized flat metal frame, and bonded to the precision lapped edge.

- There is virtually no ghosting.
- Chromatic and spherical aberration are negligible in converging beams.
- Low absorption is exhibited across the visible spectrum. Nitrocellulose material does exhibit some absorption in the ultraviolet and in the infrared beyond $2\ \mu\text{m}$.
- There is no change in the optical path.

SPECIFICATIONS: Pellicle Beamsplitters

Pellicle Thickness	$\leq 2\ \mu\text{m}$
Optical Material	Select optical grade nitrocellulose
Index of Refraction	1.5
Coating	Available uncoated or coated
Surface Quality	40-20 scratch and dig
Operating Temperature	-40°C to $+125^{\circ}\text{C}$
Frame	Hard aluminum alloy, black anodized

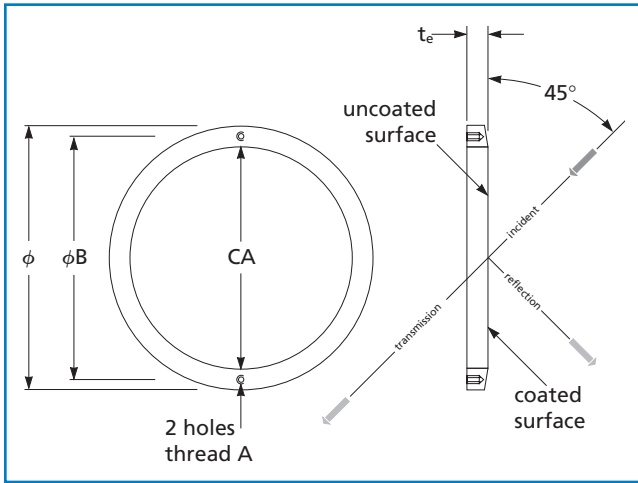
Caution

Pellicle surfaces must not be touched. Clean only with a gentle flow of clean, dry air.

Pellicle Beamsplitters

Wavelength (nm)	Reflection	Transmission	CA (mm)	ϕ (mm)	t_e (mm)	Thread A	ϕB	PART NUMBER	
								FORMER†	REPLACED BY
uncoated	8.0 ± 2.0	92.0	25.4	34.9	4.8	2-56	30.2	03 BPL 001	PLB-VIS-8-10
uncoated	8.0 ± 2.0	92.0	50.8	63.5	6.4	2-56	57.2	03 BPL 003	PLB-VIS-8-20
uncoated	8.0 ± 2.0	92.0	76.2	88.9	6.4	2-56	82.6	03 BPL 005	PLB-VIS-8-30
uncoated	8.0 ± 2.0	92.0	101.6	114.3	6.4	2-56	108.0	03 BPL 007	PLB-VIS-8-40
400-700	40.0 ± 10.0	60.0	25.4	34.9	4.8	2-56	30.2	03 BPL 001/04	PLB-VIS-40-10
400-700	40.0 ± 10.0	60.0	50.8	63.5	6.4	2-56	57.2	03 BPL 003/04	PLB-VIS-40-20
400-700	40.0 ± 10.0	60.0	76.2	88.9	6.4	2-56	82.6	03 BPL 005/04	PLB-VIS-40-30
400-700	40.0 ± 10.0	60.0	101.6	114.3	6.4	2-56	108.0	03 BPL 007/04	PLB-VIS-40-40
633	33.0 ± 5.0	67.0	25.4	34.9	4.8	2-56	30.2	03 BPL 001/03	PLB-633-33-10
633	33.0 ± 5.0	67.0	50.8	63.5	6.4	2-56	57.2	03 BPL 003/03	PLB-633-33-20
633	33.0 ± 5.0	67.0	76.2	88.9	6.4	2-56	82.6	03 BPL 005/03	PLB-633-33-30
633	33.0 ± 5.0	67.0	101.6	114.3	6.4	2-56	108.0	03 BPL 007/03	PLB-633-33-40
633	50.0 ± 5.0	50.0	25.4	34.9	4.8	2-56	30.2	03 BPL 001/02	PLB-633-50-10
633	50.0 ± 5.0	50.0	50.8	63.5	6.4	2-56	57.2	03 BPL 003/02	PLB-633-50-20
633	50.0 ± 5.0	50.0	76.2	88.9	6.4	2-56	82.6	03 BPL 005/02	PLB-633-50-30
633	50.0 ± 5.0	50.0	101.6	114.3	6.4	2-56	108.0	03 BPL 007/02	PLB-633-50-40

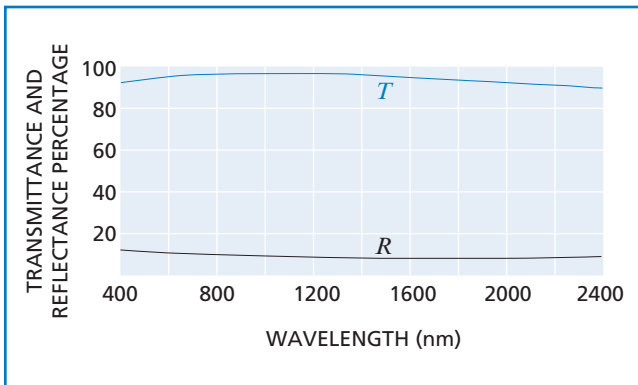
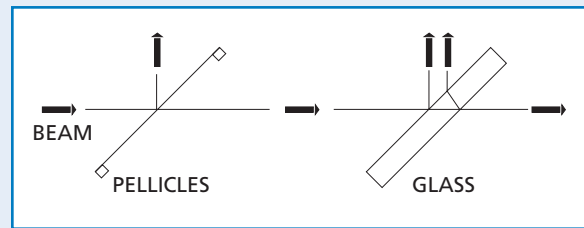
† Former Melles Griot part number is replaced by new CVI Melles Griot part number



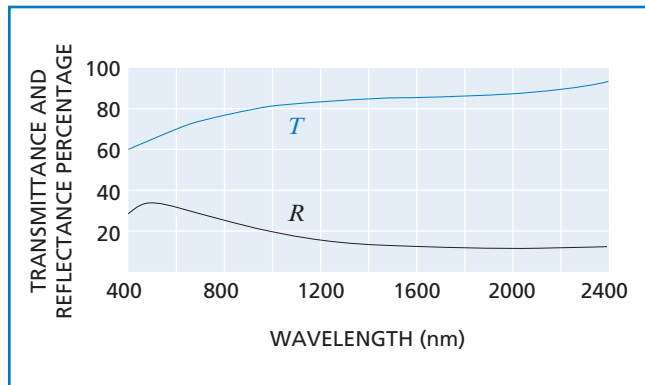
03 BPL pellicle beamsplitters

APPLICATION NOTE

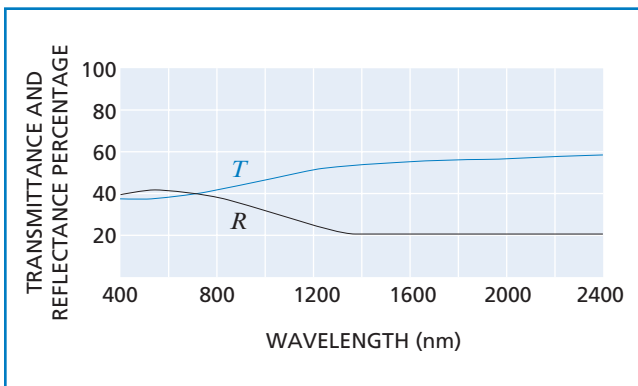
Comparison Between Glass Plate Beamsplitter and a Pellicle Beamsplitter



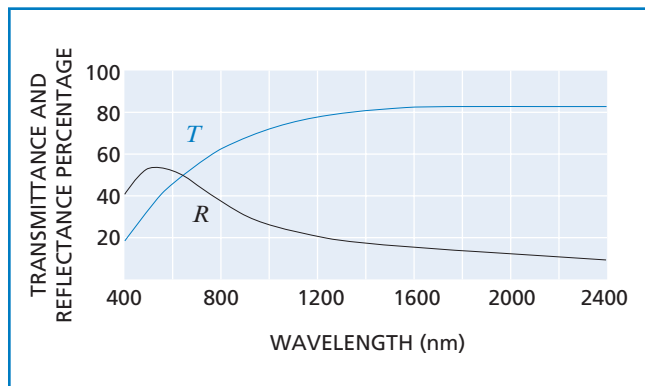
Pellicle beamsplitter uncoated



633nm pellicle beamsplitter coating 33/67



400-700nm pellicle beamsplitter coating 40/60



633nm pellicle beamsplitter coating 50/50