



# ***OPTICS CATALOGUE***

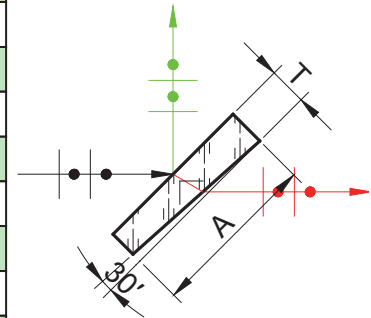
**(2017-2018)**



## Broadband Dielectric Beamsplitters

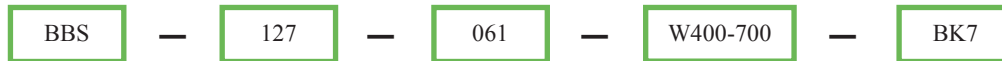
### Specifications

|                                 |   |
|---------------------------------|---|
| <b>Material:</b>                | BK7 or UV fused silica  |
| <b>Dimension Tolerance:</b>     | +0/-0.13mm  |
| <b>Thickness Tolerance:</b>     | ±0.38 mm  |
| <b>Wedge:</b>                   | 30±15 arc min   |
| <b>Wavefront Distortion:</b>    | $\lambda/10@632.8\text{nm}$ over the clear aperture   |
| <b>Clear Aperture:</b>          | >Central 80% of diameter  |
| <b>S1 Beamsplitter Coating:</b> | $R_s=50\% \pm 5\%$ , $R_p \leq R_s @ 45^\circ$ incidence  |
| <b>S2 AR Coating:</b>           | Multilayer coating: $R_{\text{avg}} < 0.75\% @ 45^\circ$ incidence  |
| <b>Chamfers:</b>                | 25.4mm:0.25-0.76 mm face width x $45^\circ \pm 15^\circ$<br>50.8 mm:0.38-1.14 mm face width x $45^\circ \pm 15^\circ$ |
| <b>Damage Threshold:</b>        | 500W/cm <sup>2</sup> , 1J/cm <sup>2</sup> with 10 nsec pulses   |



NOTE: Mark beamsplitter surface with a arrow on the side

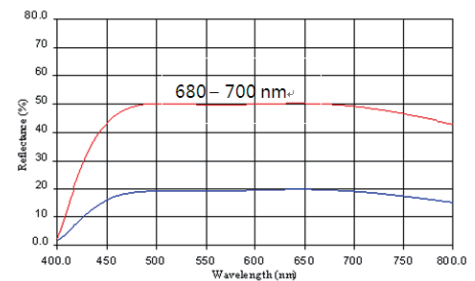
### Order Information



Product Code Dimension "A"= 12.7mm Thickness=6.1mm Wavelength "λ"=400-700nm Material

### Broadband Dielectric Beamsplitters

| Part number        | Diameter A (mm) | Thickness T (mm) | Material |
|--------------------|-----------------|------------------|----------|
| BBS-127-031-λ-BK7  | 12.7            | 3.1              | BK7      |
| BBS-254-061-λ-BK7  | 25.4            | 6.1              | BK7      |
| BBS-50.8-094-λ-BK7 | 50.8            | 9.4              | BK7      |
| BBS-127-031-λ-UVFS | 12.7            | 3.1              | UVFS     |
| BBS-254-061-λ-UVFS | 25.4            | 6.1              | UVFS     |
| BBS-508-094-λ-UVFS | 50.8            | 9.4              | UVFS     |



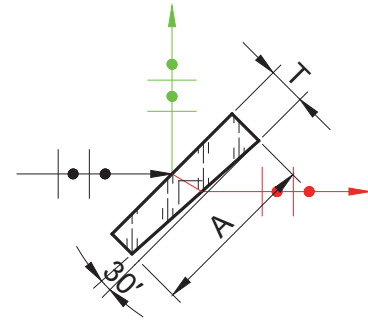
### Standard Wavelength Range(λ)

|            |            |              |
|------------|------------|--------------|
| 480-700 nm | 700-950 nm | 1290-1580 nm |
|------------|------------|--------------|

## Laser Line Non-Polarizing Beamsplitters

### Specifications

|                                     |   |
|-------------------------------------|---|
| <b>Material:</b>                    | BK7   |
| <b>Dimension Tolerance:</b>         | +0/-0.13mm  |
| <b>Surface Quality:</b>             | 20/10 scratch / dig   |
| <b>Thickness :</b>                  | 6.1 ± 0.38mm  |
| <b>Wedge:</b>                       | 30 ± 15 arc min   |
| <b>Wavefront Distortion:</b>        | $\lambda/10@632.8\text{nm}$ over the clear aperture               |
| <b>Clear Aperture:</b>              | >Central 80% of diameter  |
| <b>Angle of Incidence :</b>         | 45° ± 3°  |
| <b>Transmission:</b>                | 50% ± 5%, independent of polarization                             |
| <b>Reflection:</b>                  | 50% ± 5% independent of polarization                              |
| <b>Polarization:</b>                | P- and S-polarization components matched to within 5%             |
| <b>Absorbtion:</b>                  | <0.5%   |
| <b>Antireflective &amp; Coating</b> | Multilayer coating: $R_{\text{avg}} < 0.5\% @ 45^\circ$ incidence |
| <b>Damage Threshold:</b>            | 500W/cm <sup>2</sup> , 0.5J/cm <sup>2</sup> with 10nsec pulses    |



NOTE: Mark beamsplitter surface with a arrow on the side

Polarization components matched to within 5%

Virtually zero absorption for true 50/50 beamsplitting

### Order Information

BSNP — 254 — 061 — W1064

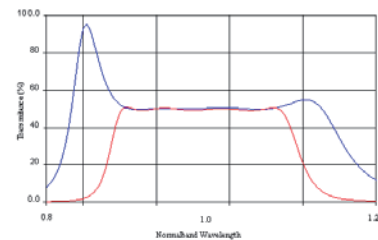
Product Code    Dimension "A"= 25.4mm    Thickness= 6.1mm    Wavelength "λ"=1064nm

### Standard Wavelength (nm):

|          |        |          |         |          |         |
|----------|--------|----------|---------|----------|---------|
| 441.6 nm | 488 nm | 514.5 nm | 532 nm  | 632.8 nm | 1550 nm |
| 670 nm   | 780 nm | 830 nm   | 1064 nm | 1300 nm  |         |

### Laser Line Non-Polarization Beamsplitters

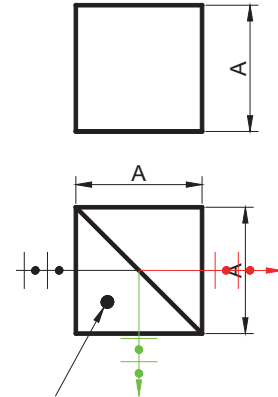
| Part number    | Diameter A (mm) | Thickness T (mm) | Material |
|----------------|-----------------|------------------|----------|
| BSNP-127-031-λ | 12.7            | 3.1              | BK7      |
| BSNP-254-061-λ | 25.4            | 6.1              | BK7      |
| BSNP-508-094-λ | 50.8            | 9.4              | BK7      |



# Broadband Non-Polarization Beamsplitter Cubes

## Specifications

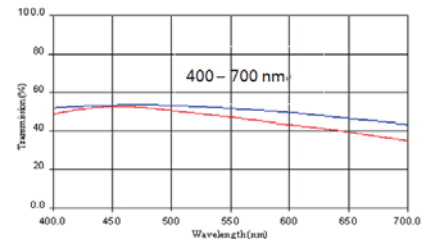
|                                    |  |
|------------------------------------|--|
| <b>Material:</b>                   | BK7  |
| <b>Dimension Tolerance:</b>        | $\pm 0.25\text{mm}$  |
| <b>Surface Quality:</b>            | 60/40 scratch / dig  |
| <b>Wavefront Distortion:</b>       | $\lambda/4@632.8\text{nm}$ over the clear aperture                     |
| <b>Clear Aperture:</b>             | >Central 80% of diameter   |
| <b>Transmitted Beam Deviation:</b> | <5 arc min   |
| <b>Reflected Beam Deviation:</b>   | $90^\circ \pm 5^\circ$ arc min   |
| <b>Transmission:</b>               | $T_{s,p}=45 \pm 5\%$ average and $35\% \leq T_{s,p} \leq 55\%$         |
| <b>Reflection:</b>                 | $R_{s,p}=45 \pm 5\%$ average and $35\% \leq R_{s,p} \leq 55\%$         |
| <b>Polarization:</b>               | $ T_s - T_p  \leq 10\%$ and $ R_s - R_p  \leq 10\%$                    |
| <b>Antireflection Coating:</b>     | Broadband multilayer coating : $R_{\text{avg}} < 0.5\%$ per surface    |
| <b>Chamfers:</b>                   | <0.5mm face width $\times 45^\circ$ typical                            |
| <b>Damage Threshold:</b>           | 100W/cm <sup>2</sup> , 0.1J/cm <sup>2</sup> with 10nsec pulses typical |



NOTE: To avoid damage, a dot placed on the side indicating beam must enter prism.

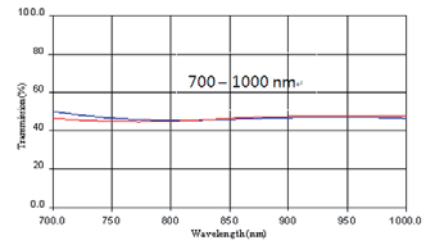
## Order Information

BNPBC — 127 — W400-700  
 Product Code    Dimension "A"=12.7mm    Wavelength Range  
 "λ"=400-700 nm



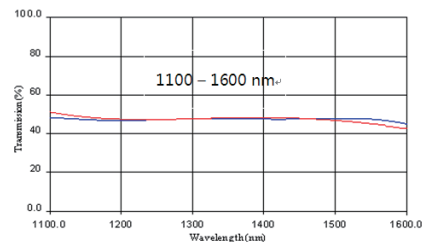
## Broadband Non-Polarization Beamsplitter Cubes

| Part Number | Dimension A (mm) |
|-------------|------------------|
| BNPBC-063-λ | 6.35             |
| BNPBC-127-λ | 12.7             |
| BNPBC-200-λ | 20.0             |
| BNPBC-254-λ | 25.4             |



## Standard Wavelength Range(λ)

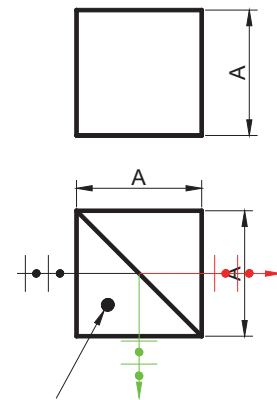
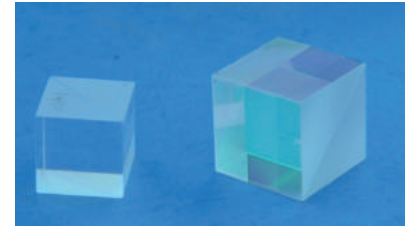
|            |             |              |
|------------|-------------|--------------|
| 400-700 nm | 700-1100 nm | 1100-1600 nm |
|------------|-------------|--------------|



## UV Non-Polarization Beamsplitter Cubes

### Specifications

|                                    |  |
|------------------------------------|--|
| <b>Material:</b>                   | UV fused silica  |
| <b>Dimension Tolerance:</b>        | $\pm 0.25\text{mm}$  |
| <b>Surface Quality:</b>            | 40/20 scratch / dig  |
| <b>Wavefront Distortion:</b>       | $\lambda/4@632.8\text{nm}$ over the clear aperture                       |
| <b>Clear Aperture:</b>             | >Central 80% of diameter   |
| <b>Transmitted Beam Deviation:</b> | <5 arc min   |
| <b>Reflected Beam Deviation:</b>   | $90^\circ \pm 5^\circ$ arc min   |
| <b>Transmission:</b>               | $50 \pm 3\%$ , independent of polarization                               |
| <b>Reflection:</b>                 | $50 \pm 3\%$ , independent of polarization                               |
| <b>Polarization:</b>               | $ T_s - T_p  \leq 15\%$ and $ R_s - R_p  \leq 15\%$                      |
| <b>Antireflection Coating:</b>     | Multilayer coating : $R_{\text{avg}} < 0.5\%$ per surface                |
| <b>Chamfers:</b>                   | <0.5mm face width $\times 45^\circ$ typical                              |
| <b>Damage Threshold:</b>           | 1 KW/cm <sup>2</sup> , 0.5J/cm <sup>2</sup> with 10 nsec pulses, typical |



NOTE: To avoid damage, a dot placed on the side indicating beam must enter prism.

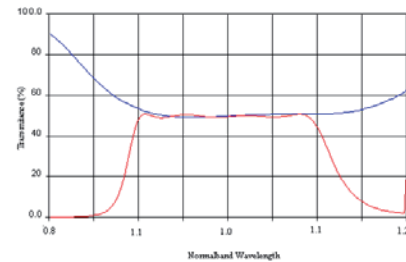
### Order Information

UNPBC — 127 — W325

Product Code Dimension "A" = 12.7mm Design Wavelength  
"λ" = 325 nm

### UV Non-Polarization Beamsplitter Cubes

| Part number | Dimension A (mm) |
|-------------|------------------|
| UNPBC-063-λ | 6.35             |
| UNPBC-127-λ | 12.7             |
| UNPBC-150-λ | 15.0             |
| UNPBC-200-λ | 20.0             |
| UNPBC-254-λ | 25.4             |



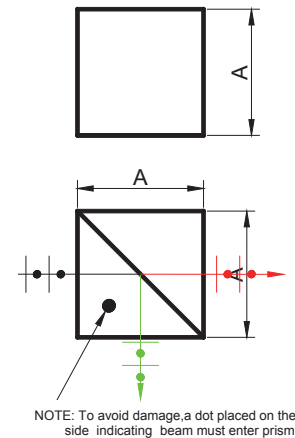
### Standard Wavelength(λ)

|        |          |        |        |
|--------|----------|--------|--------|
| 325 nm | 337.1 nm | 355 nm | 365 nm |
|--------|----------|--------|--------|

## Laser Line Non-Polarization Beamsplitter Cubes

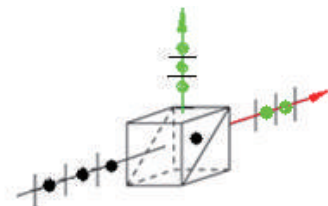
### Specifications

|                                    |   |
|------------------------------------|---|
| <b>Material:</b>                   | BK7   |
| <b>Dimension Tolerance:</b>        | $\pm 0.25\text{mm}$   |
| <b>Surface Quality:</b>            | 40/20 scratch / dig   |
| <b>Wavefront Distortion:</b>       | $\lambda/4@6328\text{nm}$ over the clear aperture                             |
| <b>Clear Aperture:</b>             | Central diameter, $>80\%$ of dimension  |
| <b>Transmitted Beam Deviation:</b> | $<5$ arc min  |
| <b>Reflected Beam Deviation:</b>   | $90^\circ \pm 5^\circ$ arc min  |
| <b>Transmission:</b>               | $50 \pm 3\%$ , independent of polarization $5^\circ$ arc min                  |
| <b>Reflection:</b>                 | $50 \pm 3\%$ , independent of polarization                                    |
| <b>Polarization:</b>               | $ T_s - T_p  \leq 3\%$ and $ R_s - R_p  \leq 3\%$                             |
| <b>Antireflection Coating:</b>     | Multilayer coating : $R_{\text{avg}} < 0.5\%$ per surface                     |
| <b>Chamfers:</b>                   | $<0.5\text{mm}$ face width $\times 45^\circ$ typical                          |
| <b>Damage Threshold:</b>           | $2\text{KW}/\text{cm}^2$ , $1\text{J}/\text{cm}^2$ with 10nsec pulses typical |



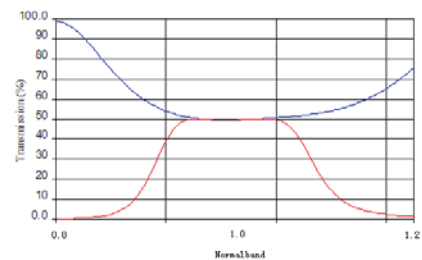
### Order Information

NPBC — 127 — W1064  
 Product Code Dimension "A"=12.7mm Design Wavelength  
 "λ"=1064 nm



### Laser Line Non-Polarization Beamsplitter Cubes

| Part number | Dimension A (mm) |
|-------------|------------------|
| NPBC-063-λ  | 6.35             |
| NPBC-127-λ  | 12.7             |
| NPBC-150-λ  | 15.0             |
| NPBC-200-λ  | 20.0             |
| NPBC-254-λ  | 25.4             |



### Standard Wavelength(λ)

|          |              |         |          |         |
|----------|--------------|---------|----------|---------|
| 441.6 nm | 488-514.5 nm | 532 nm  | 632.8 nm | 670 nm  |
| 780 nm   | 830 nm       | 1064 nm | 1300 nm  | 1550 nm |



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