

PBG11107 - December 16, 2019

Item # PBG11107 was discontinued on December 16, 2019. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

ALUMINUM BREADBOARDS: HIGH STIFFNESS, 25 MM (0.98") THICK

- ▶ Aluminum Plates and Core Minimize Thermal Instabilities
- ▶ High Strength-to-Weight Ratio
- ▶ Non-Magnetic Material
- ▶ Breadboards with Rail-Compatible Sides Available



PBG1212F
12" x 12" UltraLight™ Optical Breadboard

PBG11119
12" x 18" UltraLight™ Optical Breadboard

T-Slot for 25 mm Rail Compatibility



See BB Selection Guide Tab

OVERVIEW

Features

- Thickness: 25 mm (0.98")
- Sides with Smooth Finish or T-Slot for 25 mm Rail Compatibility
- Lighter than Equivalent Surface Area Solid Aluminum Surface Plates
- All-Aluminum Plates and Core for Matching CTE to Reduce Thermal Effects
- Large Range of Sizes (W x L):
 - Imperial: 1' x 1' to 3' x 4'
 - Metric: 300 mm x 300 mm to 900 mm x 1500 mm
- More Rigid than 0.5" Thick Solid Aluminum Breadboards (See *Construction* Tab for Details)
- Matte Black Painted Surface Reduces Reflectivity and Backscatter
- High-Density Honeycomb Core Provides Static and Dynamic Rigidity
- Custom Sizes Available; Contact Tech Support for Details

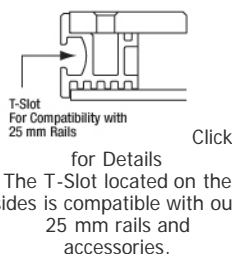
General Specifications^a

| General Specifications ^a | |
|-------------------------------------|---|
| Breadboard Thickness | 25 mm (0.98") |
| Top Skin Flatness | ±0.15 mm (±0.006") Over Any 0.3 m ² |
| Construction | Double-Plate, Single-Honeycomb Core, Athermalized Aluminum Design |
| Top Plate | 6 mm Thick Aluminum |
| Bottom Plate | 3 mm Thick Aluminum |
| Core | High-Density Plated Aluminum Honeycomb |
| Finish | Matte Black Paint |
| Maximum Screw Depth | 6 mm (0.24") from Top Surface |
| Breadboard Mounting | 1/4"-20 (M6) Taps on Bottom Plate |

- a. For additional specifications that include specific breadboard dimensions and weights, see the tables below.

Thorlabs' UltraLight™ Honeycomb Breadboards offer a high strength-to-weight ratio and all-aluminum plates and core. Due to this construction, each breadboard has similar coefficients of

thermal expansion throughout, which minimizes thermal instabilities. These breadboards are ideal for optical setups where portability and dynamic rigidity are important. They are typically used as replacements for aluminum, steel, or granite surface plates, as well as for applications demanding a totally nonmagnetic surface. Additionally, breadboards ending in "F" or "A" feature a t-slot that is compatible with our 25 mm rails and accessories. This allows for construction of rail systems or optical enclosures without the loss of taps. These breadboards also have plastic covers on the corners; two have labels with either the item number or serial number.



An optical enclosure can be constructed and attached to the side of a 25 mm rail compatible breadboard for easy placement of the enclosure. Please note this application requires the use of drop-in T-Nuts and standard 8-32 cap screws for attaching the hinges to the breadboard.

Choosing an Optical Breadboard

When choosing an aluminum optical breadboard, stiffness is a major consideration. For aluminum optical breadboards, Thorlabs offers two levels of stiffness: high and enhanced. Although most people associate deflection under load with thickness, it is actually the stiffness of a board that determines the deflection.



The higher the stiffness, the better the breadboard's ability to resist bending when a load or force is applied to it. Therefore, when a heavy load is placed in the center of a breadboard with high stiffness, the board will deflect more than it would if the same load were placed on an enhanced stiffness breadboard. This deflection can create misalignment between two components on opposite ends of the breadboard. This is especially important, for example, when conducting experiments that require sliding optical setups across the breadboard while maintaining a straight optical axis.

We also offer a broad selection of Nexus® Steel Honeycomb Breadboards, which provide greater stiffness

and vibration damping. For a quick comparison of our different breadboard options, please see the *BB Selection Guide* tab.

Frame and Isolation Options

We offer a number of support options for breadboards. Our standard breadboard frames are available with rigid supports, or with passive or self-leveling active vibration isolation. We also offer passive and electronic isolator feet for mounting a breadboard on top of a table.

CONSTRUCTION

Ultralight™ Honeycomb Aluminum Breadboard Construction

Thorlabs UltraLight™ optical breadboards offer high strength-to-weight ratio and excellent thermal stability. These breadboards are ideal for optical setups where portability and dynamic rigidity are important. Breadboards with item numbers that do not have a letter at the end feature standard aluminum side panels, while those with item numbers ending in F or A feature t-slots with compatibility with our 25 mm rails and their accessories.



Click to Enlarge Construction Features

As shown in the diagram to the right, these breadboards incorporate a double-plate, single-honeycomb design, providing excellent stiffness and dynamic rigidity (see test performed below). The top layer consists of a 6 mm aluminum top plate. The second layer adds the main aluminum honeycomb structure and the 3 mm aluminum bottom plate. The main honeycomb core is fabricated from strips of precision-formed plated aluminum, which is bonded together with a high tensile strength epoxy adhesive. This all-aluminum construction minimizes thermal bowing effects caused by temperature variations.

Excellent Surface Flatness

Breadboard flatness is critically important during many experimental setups. Lack of local flatness requires readjustment of components for height variations across the breadboard and can cause component "wobble". Thorlabs breadboards offer an unsurpassed flatness of ± 0.15 mm (± 0.006 ") over any 0.3 m² area due to the high-precision aluminum plates which are specially handled to maintain superior flatness throughout the manufacturing process. A unique thermal bonding process ensures that stress is not induced during manufacture, thereby retaining the flatness of the top plate.

Stiffness Comparison Testing: Honeycomb Aluminum Breadboards vs. Solid Aluminum Breadboards

Purpose: Show that an UltraLight PBG60120A breadboard measuring 600 mm x 1200 mm x 25 mm with an unpackaged mass of 20.3 kg has a greater stiffness than the equivalent size MB60120/M solid aluminum breadboard that is 0.5" thick and has an unpackaged mass of 23.49 kg.

Procedure: As shown in Figure 1 below, each table was supported by fulcrum points that were spaced 1 m apart. Then, various loads were applied uniformly across the center of the breadboard and the amount of deflection was measured. From the data collected, a plot of Force vs. Displacement was created as shown to the right.

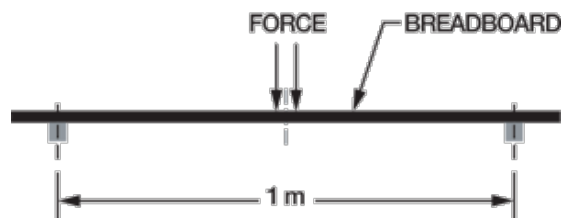


Figure 1: Both breadboards were reinforced at two defined fulcrum points. A uniform force was then applied to the center of each board and deflection measured.

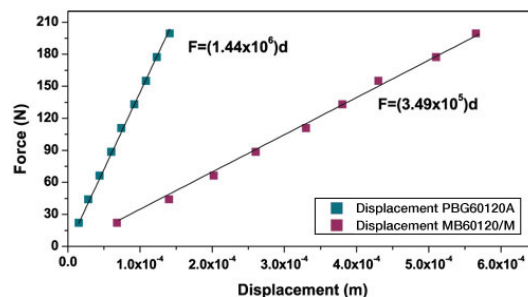














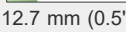





Figure 2: Plot Showing the Overall Displacement of the PBG60120A and MB60120/M After a Uniform Force was Applied to the Center of the Breadboard (See Diagram to the Left)

Results: The result shown in figure 2 shows that the PBG60120A honeycomb aluminum breadboard, which is 14% lighter than the MB60120/M solid aluminum breadboard, is 4.1 times stiffer. This can be found by dividing the two stiffness values, 1.44×10^6 and 3.49×10^5 .

Conclusions: As can be seen in Figure 2, it is clear that the PBG60120A UltraLight honeycomb aluminum breadboards, though lighter by 3.19 kg, have a greater stiffness than the MB60120/M 0.5" thick solid aluminum breadboards. Therefore, our UltraLight series of breadboards is an excellent choice if you are looking for a light-weight breadboard with extremely good rigidity.

BB SELECTION GUIDE

| Breadboards |  Nexus, Optimized Damping |  Intrinsically Damped |  Aluminum Honeycomb |  Stainless Steel |  Solid Aluminum |  Optically Clear Acrylic |
|----------------------|--|--|--|--|--|---|
| Construction | | | | | | |
| Breadboard Thickness | 60 mm (2.4") 110 mm (4.3") | 58 mm (2.28") | 25 mm (0.98") 55 mm (2.2") | 12.7 mm (0.5") | 7.0 mm (0.28") 9.5 mm (0.375") 12.7 mm (0.5") 19.05 mm (0.75") | 12.7 mm (0.5") |
| Working Surface | 430 Grade Stainless Steel or 304L Grade Nonmagnetic Steel Top Plate | 430 Grade Stainless Steel Top Plate | Aluminum | 416 Grade Stainless Steel | Solid Aluminum Anodized or Unanodized | Acrylic |
| Top Skin | 5 mm (0.20") | 5 mm (0.20") | 6 mm (0.24") | N/A | N/A | N/A |
| Bottom Skin | 5 mm (0.20") | 3 mm (0.12") | 3 mm (0.12") | N/A | N/A | N/A |
| Core Design | High-Density Plated Steel Honeycomb, 0.26 mm Thick | | High-Density Plated Aluminum Honeycomb | N/A | N/A | N/A |
| Side Panels | Rigid Steel Box Section | Unplasticized Polyvinyl Chloride (uPVC) | Black Laminated Aluminum Sides | N/A | N/A | N/A |
| Ferromagnetism | Magnetic or Non-Magnetic Options | Magnetic | Non-Magnetic | Magnetic | Non-Magnetic | |
| Sealed Holes | Sealed (25 mm Depth) or Non-Sealed Options | Non-Sealed | | N/A | N/A | N/A |
| | | | | | 1/4"-20 (M6), 4-40 | |

| | | | | | | |
|-----------------------------------|--|--|--|--|---|---|
| Thread Options | 1/4"-20 (M6) Tapped Holes | 1/4"-20 (M6) Tapped Holes | | 1/4"-20 (M6) Tapped Holes | (M3), or 8-32 (M3) and 1/4"-20 (M6) Tapped Holes | 1/4"-20 Tapped Holes |
| Spacing | 1" (25 mm) Centers | 1" (25 mm) Centers | | 1" (25 mm) Centers | 1" (25 mm) Centers or 0.5" (12.7 mm) Centers | 0.5" (12.7 mm) Centers |
| Distance from Edge to First Holes | 0.5" (12.5 mm) on all Sides | | 0.5" (12.5 mm) or 1.0" (25 mm) on all Sides | 0.5" (12.5 mm) on all Sides | 0.5" (12.5 mm) on all Sides | 1.0" (25.4 mm) on all Sides |
| Performance ^a | | | | | | |
| Damping |  |  |  | N/A | N/A | N/A |
| Stiffness |  60 mm (2.4") Thick |  58 mm (2.28") Thick |  25 mm (0.98") Thick |  12.7 mm (0.5") Thick |  7.0 mm (0.28") Thick |  12.7 mm (0.5") Thick |
| |  110 mm (4.3") Thick | |  55 mm (2.2") Thick | |  19.05 mm (0.75") Thick | |

- a. The damping and stiffness performance shown here is qualitative and does not relate to exact specifications of each breadboard.

Optical Breadboard Selection Guides

The selection guides below list every size offered for our honeycomb, solid aluminum, and acrylic breadboards. Simply locate the specific width and length needed and then select the type of breadboard. Expand each table by clicking the *More [+]* button within the header.

Thorlabs also offers several unique breadboard solutions. For applications requiring temperature control, we offer anodized aluminum water cooled breadboards in several sizes, in addition to a temperature-controlled mini-series breadboard for small-scale operations. Our anodized aluminum large-area translation stages and rotating breadboards offer hand-operated positioning control, while our manual and motorized translating mounting platforms are ideal for use in microscopy applications.

| Imperial Optical Breadboard Size Options | | | | | | | | | | | |
|--|--------|----------------------------------|-----------------------------------|------------------------------------|------------------------|------------------------|-----------------|-----------------------------|----------------|--------------|----------------------|
| Width | Length | Honeycomb | | | | | Stainless Steel | Solid Aluminum ^a | | | Acrylic, Transparent |
| | | Nexus (60 mm Thick) ^b | Nexus (110 mm Thick) ^b | Intrinsically Damped (58 mm Thick) | Aluminum (25 mm Thick) | Aluminum (55 mm Thick) | | Standard | Double Density | High Density | |

- a. Solid aluminum breadboards are offered with four different thicknesses: 0.5" (item # prefix MB), 0.75" (item # prefix MBH), 3/8" (item # prefix MS), or 0.28" (item # prefix MS). Select sizes are also available in hard-coat anodized aluminum (item #s CMMP1818 and CMMP2424) or without an anodized coating (item #s ending with U).
- b. Item Number Suffix:
 - F, A, B, or G: Non-Sealed Mounting Holes
 - T, L, U, or N: Sealed Mounting Holes
 - FN or AN: Nonmagnetic Mounting Holes
 - Y or Z: No Mounting Holes
 - S: Stainless Steel
- c. Tapped Hole Pattern Aligned at 45°
- d. Build-to-Order
- e. Includes a T-Slot in Side Panels for Compatibility with 25 mm Rail Accessories
- f. This product has an access aperture.

| Metric Optical Breadboard Size Options | | | | | | | | | | |
|--|--------|----------------------------------|-----------------------------------|------------------------------------|------------------------|------------------------|-----------------|-----------------------------|----------------|--------------|
| Width | Length | Honeycomb | | | | | Stainless Steel | Solid Aluminum ^a | | |
| | | Nexus (60 mm Thick) ^b | Nexus (110 mm Thick) ^b | Intrinsically Damped (58 mm Thick) | Aluminum (25 mm Thick) | Aluminum (55 mm Thick) | | Standard | Double Density | High Density |

- a. Solid aluminum breadboards are offered with four different thicknesses: 12.7 mm (item # prefix MB), 19.05 mm (item # prefix MBH), 9.5 mm (item # prefix MS), or 7.0 mm (item # prefix MS). Select sizes are also available without an anodized coating (item #s ending with U).
- b. Item Number Suffix:
 - F, A, B, or G: Non-Sealed Mounting Holes

- T, L, U, or N: Sealed Mounting Holes
- FN or AN: Nonmagnetic Mounting Holes
- Y or Z: No Mounting Holes
- S: Stainless Steel
- c. Tapped Hole Pattern Aligned at 45°
- d. Build-to-Order
- e. Includes a T-Slot in Side Panels for Compatibility with 25 mm Rail Accessories
- f. This product has an access aperture.

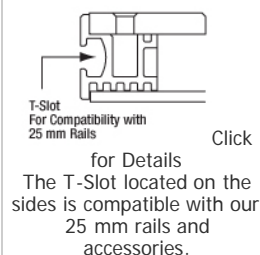
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Imperial Breadboards, 25 mm Rail Compatible Sides, Stocked in USA

These breadboards feature sides with a t-slot that is compatible with our 25 mm rails and accessories. See the diagram to the bottom left for more information.

| Item # | Size | Number of Taps | Unpackaged Mass | Unpackaged Weight | Packaged Shipping Mass ^a | Packaged Shipping Weight ^a | Distance From Edge to First Holes |
|----------|-----------|----------------|-----------------|-------------------|-------------------------------------|---------------------------------------|-----------------------------------|
| PBG1212F | 12" x 12" | 144 | 2.9 kg | 6.4 lbs | 7.0 kg | 15.4 lbs | 0.5" |
| PBG1218F | 12" x 18" | 216 | 4.1 kg | 9.0 lbs | 9.0 kg | 19.8 lbs | |
| PBG1224F | 12" x 24" | 288 | 5.5 kg | 12.1 lbs | 11.0 kg | 24.3 lbs | |
| PBG1236F | 12" x 36" | 432 | 8.1 kg | 17.9 lbs | 17.0 kg | 37.5 lbs | |
| PBG1818F | 18" x 18" | 324 | 6.0 kg | 13.2 lbs | 12.0 kg | 26.5 lbs | |
| PBG1824F | 18" x 24" | 432 | 8.1 kg | 17.9 lbs | 15.0 kg | 33.1 lbs | |
| PBG2424F | 24" x 24" | 576 | 10.7 kg | 23.6 lbs | 18.0 kg | 39.7 lbs | |
| PBG2436F | 24" x 36" | 864 | 15.8 kg | 34.8 lbs | 28.0 kg | 61.7 lbs | |
| PBG2448F | 24" x 48" | 1152 | 20.9 kg | 46.1 lbs | 36.0 kg | 79.4 lbs | |
| PBG3036F | 30" x 36" | 1080 | 19.6 kg | 43.2 lbs | 34.0 kg | 75.0 lbs | |
| PBG3048F | 30" x 48" | 1440 | 26.0 kg | 57.3 lbs | 45.0 kg | 99.2 lbs | |
| PBG3648F | 36" x 48" | 1728 | 31.0 kg | 68.3 lbs | 52.0 kg | 114.6 lbs | |

- ^aThese masses and weights are approximate and are subject to change. The information is only to be used as a guideline.



| Part Number | Description | Price | Availability |
|-------------|--|------------|--------------|
| PBG1212F | UltraLight Breadboard, 12" x 12" x 0.98", 1/4"-20 Taps | \$458.81 | Today |
| PBG1218F | UltraLight Breadboard, 12" x 18" x 0.98", 1/4"-20 Taps | \$517.26 | Today |
| PBG1224F | UltraLight Breadboard, 12" x 24" x 0.98", 1/4"-20 Taps | \$574.61 | Today |
| PBG1236F | UltraLight Breadboard, 12" x 36" x 0.98", 1/4"-20 Taps | \$691.47 | Lead Time |
| PBG1818F | UltraLight Breadboard, 18" x 18" x 0.98", 1/4"-20 Taps | \$810.51 | Today |
| PBG1824F | UltraLight Breadboard, 18" x 24" x 0.98", 1/4"-20 Taps | \$692.55 | Today |
| PBG2424F | UltraLight Breadboard, 24" x 24" x 0.98", 1/4"-20 Taps | \$810.51 | Today |
| PBG2436F | UltraLight Breadboard, 24" x 36" x 0.98", 1/4"-20 Taps | \$1,043.16 | Today |
| PBG2448F | UltraLight Breadboard, 24" x 48" x 0.98", 1/4"-20 Taps | \$1,284.47 | Today |
| PBG3036F | UltraLight Breadboard, 30" x 36" x 0.98", 1/4"-20 Taps | \$1,217.39 | Today |
| PBG3048F | UltraLight Breadboard, 30" x 48" x 0.98", 1/4"-20 Taps | \$1,516.05 | Today |
| PBG3648F | UltraLight Breadboard, 36" x 48" x 0.98", 1/4"-20 Taps | \$1,748.70 | Lead Time |

Imperial Breadboards, Smooth Sides, Stocked in USA

| Item # | Size | Number of Taps | Unpackaged Mass | Unpackaged Weight | Packaged Shipping Mass ^a | Packaged Shipping Weight ^a | Distance From Edge to First Holes |
|----------|-----------|----------------|-----------------|-------------------|-------------------------------------|---------------------------------------|-----------------------------------|
| PBG11119 | 12" x 18" | 187 | 3.9 kg | 8.6 lbs | 9.0 kg | 19.8 lbs | 1.0" |
| PBG11107 | 24" x 48" | 1081 | 19.6 kg | 43.2 lbs | 33.9 kg | 74.8 lbs | |
| PBG11111 | 30" x 48" | 1363 | 24.3 kg | 53.6 lbs | 41.9 kg | 92.4 lbs | |
| PBG11112 | 36" x 36" | 1225 | 21.9 kg | 48.3 lbs | 38.9 kg | 85.8 lbs | |

- ~~at~~ These masses and weights are approximate and are subject to change. The information is only to be used as a guideline.

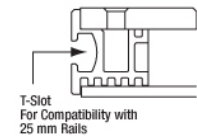
| Part Number | Description | Price | Availability |
|-------------|--|------------|--------------|
| PBG11119 | UltraLight Breadboard, 12" x 18" x 0.98", 1/4"-20 Taps | \$465.53 | Today |
| PBG11107 | UltraLight Breadboard, 24" x 48" x 0.98", 1/4"-20 Taps | \$1,041.35 | Lead Time |
| PBG11111 | UltraLight Breadboard, 30" x 48" x 0.98", 1/4"-20 Taps | \$1,228.00 | Today |
| PBG11112 | UltraLight Breadboard, 36" x 36" x 0.98", 1/4"-20 Taps | \$1,129.82 | Today |

Metric Breadboards, 25 mm Rail Compatible Sides, Stocked in UK

These breadboards feature sides with a t-slot that is compatible with our 25 mm rails and accessories. See the diagram to the bottom left for more information.

| Item # | Size | Number of Taps | Unpackaged Mass | Unpackaged Weight | Packaged Shipping Mass ^a | Packaged Shipping Weight ^a | Distance From Edge to First Holes |
|-----------|------------------|----------------|-----------------|-------------------|-------------------------------------|---------------------------------------|-----------------------------------|
| PBG3030A | 300 mm x 300 mm | 144 | 2.8 kg | 6.2 lbs | 6.0 kg | 13.2 lbs | 12.5 mm |
| PBG3045A | 300 mm x 450 mm | 216 | 4.1 kg | 9.0 lbs | 9.0 kg | 19.8 lbs | |
| PBG3060A | 300 mm x 600 mm | 288 | 5.4 kg | 11.9 lbs | 11.0 kg | 24.3 lbs | |
| PBG3090A | 300 mm x 900 mm | 432 | 8.0 kg | 17.6 lbs | 16.0 kg | 35.3 lbs | |
| PBG4545A | 450 mm x 450 mm | 324 | 6.0 kg | 13.2 lbs | 11.0 kg | 24.3 lbs | |
| PBG4560A | 450 mm x 600 mm | 432 | 7.9 kg | 17.4 lbs | 14.0 kg | 30.9 lbs | |
| PBG6060A | 600 mm x 600 mm | 576 | 10.2 kg | 22.5 lbs | 18.0 kg | 39.7 lbs | |
| PBG6090A | 600 mm x 900 mm | 864 | 15.3 kg | 33.7 lbs | 27.0 kg | 59.5 lbs | |
| PBG60120A | 600 mm x 1200 mm | 1152 | 20.3 kg | 44.8 lbs | 35.0 kg | 77.2 lbs | |
| PBG7590A | 750 mm x 900 mm | 1080 | 19.0 kg | 41.9 lbs | 33.0 kg | 72.8 lbs | |
| PBG75120A | 750 mm x 1200 mm | 1440 | 25.2 kg | 55.6 lbs | 44.0 kg | 97.0 lbs | |
| PBG90120A | 900 mm x 1200 mm | 1728 | 30.1 kg | 66.4 lbs | 50.0 kg | 110.2 lbs | |

- ~~at~~ These masses and weights are approximate and are subject to change. The information is only to be used as a guideline.



Click for Details

The T-Slot located on the sides is compatible with our 25 mm rails and accessories.

| Part Number | Description | Price | Availability |
|-------------|-------------|-------|--------------|
| | | | |

| | | | |
|-----------|--|------------|-----------|
| PBG3030A | UltraLight Breadboard, 300 mm x 300 mm x 25 mm, M6 Taps | \$458.81 | Lead Time |
| PBG3045A | UltraLight Breadboard, 300 mm x 450 mm x 25 mm, M6 Taps | \$517.26 | Lead Time |
| PBG3060A | UltraLight Breadboard, 300 mm x 600 mm x 25 mm, M6 Taps | \$574.61 | Today |
| PBG3090A | UltraLight Breadboard, 300 mm x 900 mm x 25 mm, M6 Taps | \$691.47 | Lead Time |
| PBG4545A | UltraLight Breadboard, 450 mm x 450 mm x 25 mm, M6 Taps | \$604.91 | Lead Time |
| PBG4560A | UltraLight Breadboard, 450 mm x 600 mm x 25 mm, M6 Taps | \$692.55 | Lead Time |
| PBG6060A | UltraLight Breadboard, 600 mm x 600 mm x 25 mm, M6 Taps | \$810.51 | Lead Time |
| PBG6090A | UltraLight Breadboard, 600 mm x 900 mm x 25 mm, M6 Taps | \$1,043.16 | Lead Time |
| PBG60120A | UltraLight Breadboard, 600 mm x 1200 mm x 25 mm, M6 Taps | \$1,284.47 | Lead Time |
| PBG7590A | UltraLight Breadboard, 750 mm x 900 mm x 25 mm, M6 Taps | \$1,217.39 | Lead Time |
| PBG75120A | UltraLight Breadboard, 750 mm x 1200 mm x 25 mm, M6 Taps | \$1,516.05 | Today |
| PBG90120A | UltraLight Breadboard, 900 mm x 1200 mm x 25 mm, M6 Taps | \$1,748.70 | Lead Time |

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Metric Breadboards, Smooth Sides, Stocked in UK

| Item # | Size | Number of Taps | Unpackaged Mass | Unpackaged Weight | Packaged Shipping Mass ^a | Packaged Shipping Weight ^a | Distance From Edge to First Holes |
|----------|------------------|----------------|-----------------|-------------------|-------------------------------------|---------------------------------------|-----------------------------------|
| PBG51501 | 300 mm x 300 mm | 121 | 2.5 kg | 5.5 lbs | 7.0 kg | 15.4 lbs | 25 mm |
| PBG51523 | 300 mm x 450 mm | 187 | 3.7 kg | 8.2 lbs | 9.0 kg | 19.9 lbs | |
| PBG51502 | 300 mm x 600 mm | 253 | 4.9 kg | 10.8 lbs | 11.0 kg | 24.3 lbs | |
| PBG51524 | 450 mm x 450 mm | 289 | 5.5 kg | 12.1 lbs | 12.0 kg | 26.5 lbs | |
| PBG51514 | 900 mm x 1500 mm | 2065 | 35.2 kg | 77.6 lbs | 56.9 kg | 125.4 lbs | |

- ^aThese masses and weights are approximate and are subject to change. The information is only to be used as a guideline.

| Part Number | Description | Price | Availability |
|-------------|--|------------|--------------|
| PBG51501 | UltraLight Breadboard, 300 x 300 x 25 mm, M6 Taps | \$371.65 | Today |
| PBG51523 | UltraLight Breadboard, 300 x 450 x 25 mm, M6 Taps | \$451.97 | Today |
| PBG51502 | UltraLight Breadboard, 300 x 600 x 25 mm, M6 Taps | \$465.43 | Today |
| PBG51524 | UltraLight Breadboard, 450 x 450 x 25 mm, M6 Taps | \$528.56 | Today |
| PBG51514 | UltraLight Breadboard, 900 x 1500 x 25 mm, M6 Taps | \$1,882.56 | Lead Time |

