Illuminated Components Portfolio

PRIME PRODUCTS, INC

At Prime Products, Inc., we offer custom fabrication of illuminated components to suit a wide variety of applications and industries. With our distinctive manufacturing expertise, we can provide our customers with guidance throughout their design process. After the product is designed, we follow customers' exact specifications to manufacture panels, light plates, knobs, buttons, overlays, dials, pointers, keypads, and other toning and light control products. In this book, you will find a collection of some of our recently completed projects. Contact us today for more information.

Illuminated panel

Machined blank, brown semi-gloss

- Panel machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Threaded inserts thermally pressed into back side
- White paint applied to visually match customer-supplied sample
- Spray painted opaque brown color BAC8328
- Laser etched graphics with “halos” tight to thru cuts
- Clear protective top coat per MIL-PRF-85285 mixed and applied to achieve 2-5 gloss units

Illuminated panel

Machined blank, large size, amber polarizer lenses

- Panel machined from clear polycarbonate sheet
- Threaded inserts thermally pressed into back side
- Frame machined from 6061-T6 aluminum sheet
- DZUS fasteners assembled to frame
- Light filters machined from blue 2424 acrylic installed in lamp cavities
- Amber non-glare polarizer lenses machined, painted and assembled
- Purchased injection molded buttons and amber lenses assembled
- Purchased lamp board assembled
- White paint applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics
- Clear matte protective top coat per MIL-PRF-85285

Illuminated panel

Molded blank, amber polarizer lens

- Panel injection molded by customer-directed source
- Threaded inserts thermally pressed into back side
- Amber non-glare polarizer lens assembled
- White paint applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics
- Clear matte protective top coat per MIL-PRF-85285

Illuminated panel

Machined blank, dead front lens

- Panel machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Threaded inserts thermally pressed into back side
- White paint applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque black color 37038 per Fed-Std-595
- Machined free-of-paint areas around holes
- Laser etched graphics
- Lens machined from clear lexan sheet 8A13F, sprayed "dead-front" and assembled using laser cut PSA from 3M
- Clear matte protective top coat per MIL-PRF-85285

Illuminated knob

Machined blank

- Knob with straight knurl machined from clear cast acrylic rod
- White paint applied to meet transmission requirements using customer-supplied light fixture
- Spray painted opaque black color 37038 per Fed-Std-595
- Laser etched graphics
- Clear matte protective top coat per MIL-PRF-85285

Illuminated knob

Two-shot molded blank

- Knob two-shot molded (silicone over translucent white plastic) supplied by customer
- Top surface sanded to remove existing finish
- Screen printed black background image

Illuminated keypad

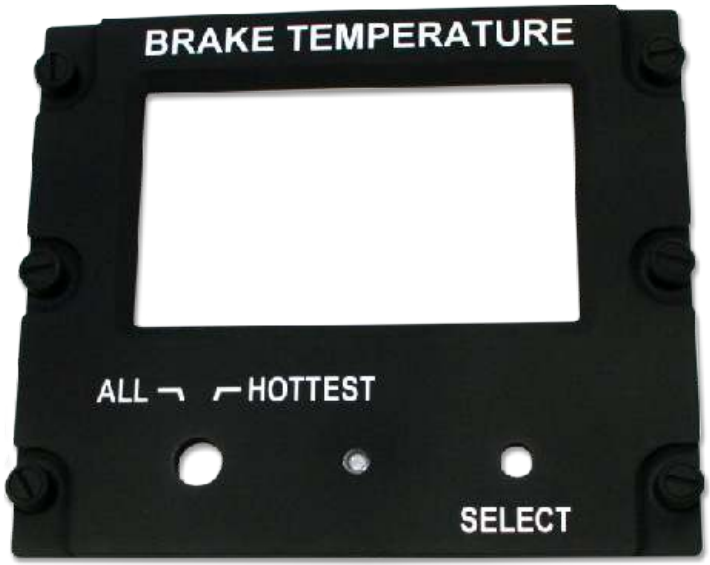
Silicone molded blank

- Silicone keypad supplied by customer
- Sprayed opaque black
- Laser etched graphics
- Custom polyurethane top coat

Illuminated panel

Machined aluminum blank with plastic inserts

- Panel machined from 6061-T651 aluminum sheet
- DZUS fasteners and helical inserts assembled
- Inserts machined from clear heat-resistant acrylic sheet per MIL-PRF-5425, assembled using epoxy adhesive and sanded to hide seam lines
- Customer-supplied lamp boards assembled using laser cut PSA from 3M
- White paint applied to face of inserts
- Spray painted opaque black color 37038 per Fed-Std-595
- Laser etched graphics
- Sensor lens machined from clear cast acrylic rod and assembled using adhesive
- Clear matte protective top coat per MIL-PRF-85285



Illuminated dial

Molded blank, screen printed multi-color

- Dial injection molded using optical grade clear polycarbonate by customer-directed source
- White paint applied to meet brightness (foot-lamberts) requirements using customer-supplied light fixture
- Spray painted opaque black color 37038 per Fed-Std-595
- Laser etched graphics
- Screen printed green, yellow and red to meet brightness (foot-lamberts) requirements using customer-supplied light fixture
- Clear matte protective top coat per MIL-PRF-85285

Illuminated pointer set

Machined blanks, aluminum hub

- Pointers machined from clear cast acrylic rod
- White paint applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque black color 37038 per Fed-Std-595
- Screen printed black
- Hub machined from 303 MAXX stainless steel rod and assembled using adhesive
- Clear matte protective top coat per MIL-PRF-85285
- Set screws installed

Illuminated dial

Machined blank, screen printed multi-color

- Dial machined from clear cast acrylic rod
- Spray painted opaque black color 37038 per Fed-Std-595
- Screen printed white, green, yellow, red and blue
- Clear matte protective top coat per MIL-PRF-85285

Illuminated component set

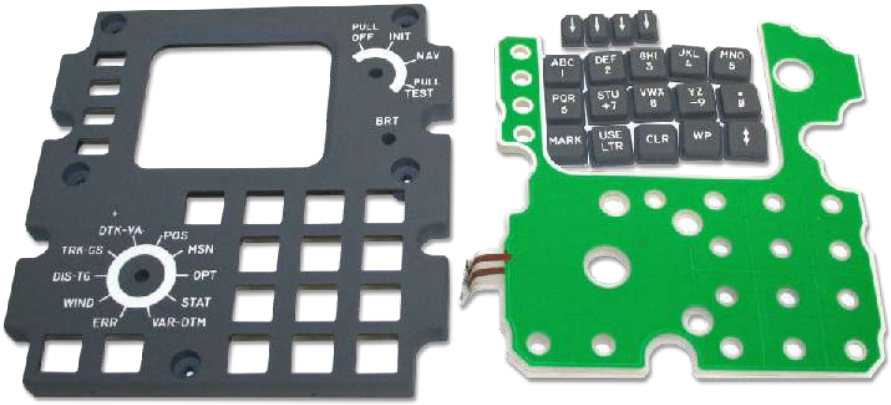
Machined blanks

- Light block and buttons machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- White paint color 37875 per Fed-Std-595 applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- All components spray painted opaque black color 37038 per Fed-Std-595
- All components spray painted opaque black color 37038
- Laser etched graphics on all buttons
- Clear matte protective top coat per MIL-PRF-85285

Illuminated panel and button set

Machined blanks, electroluminescent (EL) lamp included

- Panel and buttons machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Electroluminescent (EL) lamp included
- NVIS compatible white paint color 37875 per Fed-Std-595 applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements
- All components spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics on panel and buttons
- Clear matte protective top coat per MIL-PRF-85285



Illuminated panel

Machined blank, laser etch on angled surface

- Panel machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Threaded inserts thermally pressed into back side
- Blue light filters installed in lamp cavities
- White paint color 37875 per Fed-Std-595 applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics on face and angled surfaces
- Clear matte protective top coat per MIL-PRF-85285

Illuminated dial and pointers assembly

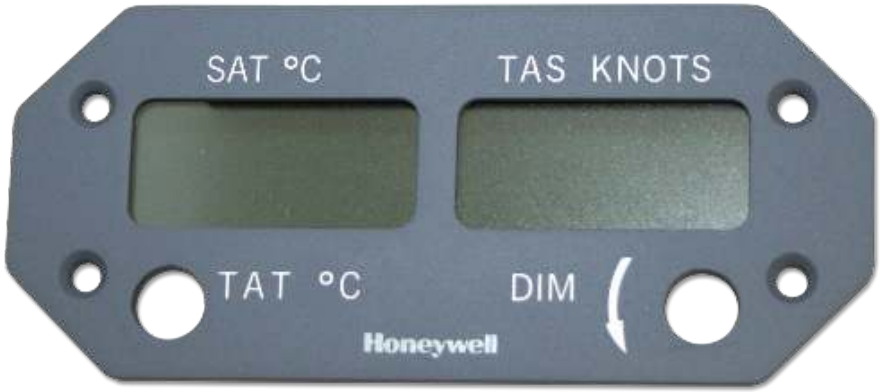
Machined blanks, lamp board included

- Dial and pointers machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Threaded inserts thermally pressed into back side of dial
- Spring and stainless steel shaft assembled onto pointers to meet torque requirements
- Lamp board assembled with screws
- White paint color 37875 per Fed-Std-595 applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements
- All components spray painted opaque black color 37038 per Fed-Std-595
- Laser etched graphics on dial and pointers
- Clear matte protective top coat per MIL-PRF-85285

Illuminated panel

Machined blank, lenses

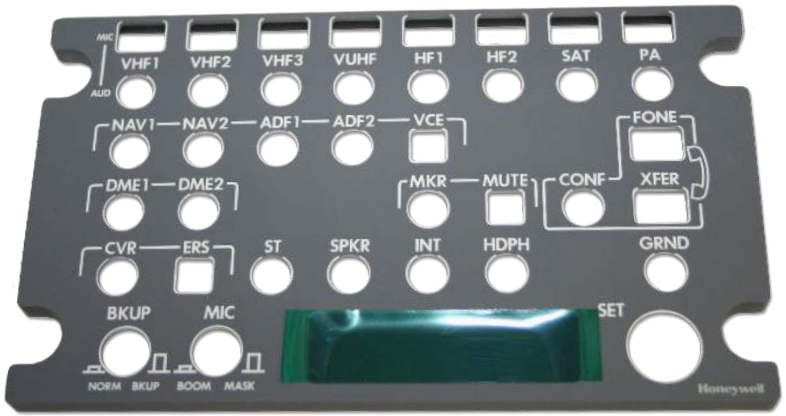
- Panel machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- White paint applied to meet brightness (foot-lamberts) and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics
- Lenses machined from polycarbonate sheet gray #10 chromafilter with AR coating and installed using adhesive
- Clear matte protective top coat per MIL-PRF-85285



Illuminated panel

Machined blank, laser etch tight to holes

- Panel machined from clear heat-resistant acrylic sheet per MIL-PRF-5425
- Threaded inserts thermally pressed into back side
- White paint applied to transmission and chromaticity (x, y) requirements using customer-supplied light fixture
- Spray painted opaque gray color 36118 per Fed-Std-595
- Laser etched graphics with “halos” tight to thru cuts
- Lens installed using Black Sealant and Flexible Conductive Silver Adhesive
- Clear matte protective top coat per MIL-PRF-85285



Illuminated counter wheel

Molded blank, rotary screen printed using resist ink

- Counter wheel blank purchased from injection molder
- White paint applied
- Rotary screen printed using proprietary resist ink
- Opaque black paint applied
- Tape-off process to remove black paint and resist ink
- Clear matte protective top coat per MIL-PRF-85285