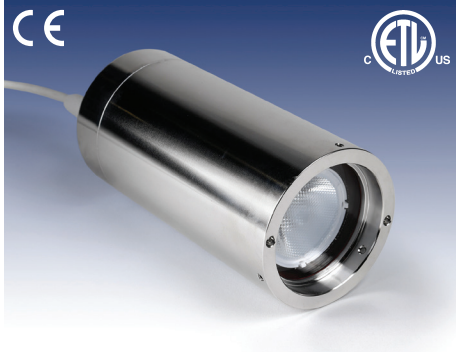


**Product  
Catalog**



## Sight Glass Lights (Luminaires)

Our sight glass lights illuminate process vessel interiors in pharmaceutical, food processing, and chemical plants. Choose from standard and explosion-proof (EX-light) housings in halogen or LED designs.



### Lumistar® Light Series

Unprecedented, penetrating illumination, up to four times brighter than a typical halogen luminaire

- Available with 1000, 2000, and 3000 lumens options
- 24 V and 110-240 V
- Power: up to 40 W
- Push button on/off switch available

- Flashlight mode (momentary), timed mode
- Temperature control on 2000 and 3000 models
- Bracket mount and sanitary tri-clamp connection available
- Crevice-free, washdown-safe
- Lumistar 1000 conforms to UL STD 2108 and certified to CSA STD 22.2 #250.0

### LumiFlo®

- FDA-compliant silicone enclosure with antimicrobial additives which will not yellow
- Designed to prevent microbial and mildew growth using nano materials
- Easily and securely attaches mechanically under the sight glass thru-bolts without the use of additional fasteners due to its omega shaped design
- Perfect color temperature light output from LED tube, with 98% CRI to identify actual process flow colors

- Easy installation and replacement with no need to modify or disassemble sight glass
- Operating Voltage: 24 VDC with M12 Connection
- Watertight seal for external Clean-In-Place (CIP) maintenance
- Battery pack accessory kit coming soon
- Optional light shield easily clips onto the back of light, reduces unwanted glare



## Explosion Proof Lights

Environmentally sealed, designed to meet UL and ATEX explosion proof ratings. Small to large, traditional halogen to LED and fiber optic for vessel sight glass view ports, dedicated light ports, and flow indicators.



### Lumiglas® 55EX-LED

- 24V AC/DC, 120-230V AC
- Up to 1100 Lumens (15W), 5700K Color Temperature
- Rated: ATEX Gas Zones 1 and 2, Dust Zones 21 and 23
- Suitable for wet conditions IP65 & IP67

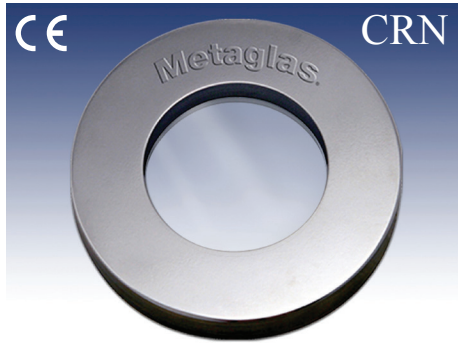
- Stainless steel or aluminum housing options
- Beam angles: 11° and 26°
- Size: 78 dia. x 163 mm length

### Lumiglas USL08EX-LED

- 120-240 VAC
- Up to 2200 Lumens (20W), 6200K Color Temperature
- Rated: UL 844 Class I, Div 1&2, Groups C&D; Div 2 Groups A&B
- Suitable for wet conditions, UL 1571
- Aluminum housing

- Bracket mount for sight/light port combo or single light port
- Beam angles: 15°, 25° and 35° (others available)
- Size: 5-1/8" wide x 8-3/8" long





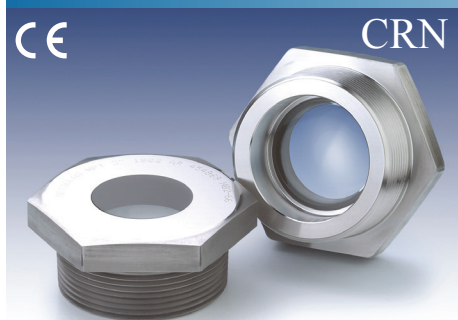
## METAGLAS® Safety Sight Windows

A unique combination of borosilicate glass fused to a metal ring places the glass in compression, creating an amazingly strong and reliable sight glass. METAGLAS is the No. 1 selling sight glass, installed in more locations around the world. Clamp-style, bolt-on, weld-on, and threaded models available.

- METAGLAS safety glass with Factory Mutual Approval (FM)
- Borosilicate Glass to DIN7080
- Temperature: to 572 °F (300 °C)
- Carbon, stainless and Hastelloy® fused to borosilicate glass to DIN7079

## METACLAMP® Sanitary Clamp Sight Glass

- For sanitary tri-clamp connection
- Borosilicate glass to USP Type I and DIN7080
- USP Class VI (tested to confirm biocompatibility)
- BPE Compliant and TÜV approved
- Sight glass fused to metal conforming to DIN7079
- Standard surface finish of 10 Ra μ-in (0.25 μm)
- Material to ASTM/ASME, TÜV and DIN/EN standards
- Certificate of Conformity to EN 10204-3.1B or 3.1A
- Pressure Equipment Directive 2014/68/EU
- Metal in Duplex and Hastelloy®, others
- Sizes: ½" to 12"



## METAGLAS Type 61 Threaded

- Borosilicate glass to DIN7080
- Sight glass fused to metal conforming to DIN7079
- Pressure Equipment Directive 2014/68/EU, Module H (DIN/EN/ISO 9001)
- Sizes 1/4" thru 3" NPT. Other thread types available
- Rated 1,450 psi @ 536°F. Higher pressures and temperatures available.
- AD 2000 Standards W0/TRD 100
- Materials to VdTÜV specifications and the DIN/EN designated standards
- Ring material: Carbon steel (1.0570), stainless steel (1.4462), Hastelloy

## Visual Flow Indicators and Full View Visual Flow Indicators

- Tempered borosilicate glass
- Independently bolted, cast metal glass retainers
- Stainless steel glass retainers and Gylon® gaskets (stainless steel units)
- Threaded, flanged and full-view units available
- Investment cast surface finish
- Acrylic enamel coating (carbon steel unit)
- In-stock delivery
- Factory Mutual (FM) units available
- Lighting options available



## Sterile Visual Flow Indicators

- Three Design Styles: Threaded Assembly (SVFI), Clamp Assembly (CT-SVFI) and Full View (FVS)
- Ideal for high purity applications
- Compatible with SIP/CIP (Sterilize-In-Place/Clean-In-Place) processes
- ASME BPE compliant with full traceability on materials
- 316L is standard, special alloys available
- All gaskets meet USP Class VI, are FDA compliant and are fully traceable
- Gasket materials: EPDM, Silicone, Viton, or FEP jacketed silicone
- CRN not valid on CT version
- Sanitary clamp connection standard, others available
- Units available from stock in tube OD sizes 3/8"– 4"

## Weld-On Sight Glasses



### DIN28120 and Low Pressure

Industrial sight glass assembly with glass sandwiched between two gasketed metal rings. The bottom ring is welded to the vessel. High and low pressure models.

- Circular pad flange assembly for welding into or onto vessel wall
- Glass: Borosilicate, quartz or other
- View diameter 80-225 mm (3" to 9")
- Operating temperature 536°F (280°C) with borosilicate glass to DIN7080, high temperature designs available

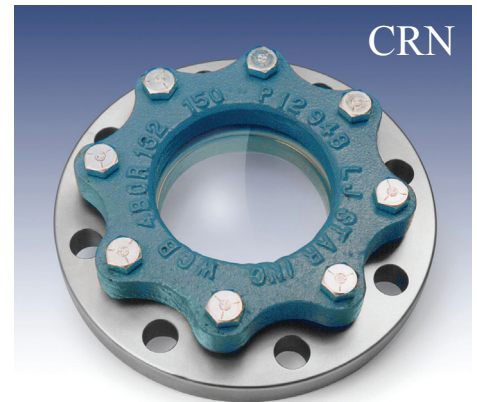
- Up to 235 psi; low pressure units up to 15 psi
- Materials: stainless, carbon steels and Hastelloy
- Custom built versions available
- Also available with METAGLAS (FM Approved)
- Available with LED Light (shown)
- Wipers and spray nozzles available

## Bolt-On Sight Glasses

Bolt-on sight glass units consist of a base with raised face flange to fit standard ANSI Class 150 flange nozzles. The glass disc, either borosilicate or quartz, is clamped in place by a gasketed glass retainer held by threaded bolts.

- Units are Full ANSI rated
- Viewing diameter 2" to 8"
- Operating Temperature: 500°F (260°C) with borosilicate glass, high temperature designs available

- Standard alloys – 316 stainless steel; carbon steel
- Standard gasket materials Gylon 3504
- Standard Window Material Tempered borosilicate glass
- Models available with METAGLAS option for high pressure up to 600# classes (FM Approved)
- PFA lining available for added corrosion resistance
- Optional glass protection shields (FEP and Mica)



## MV-ME Light and Window Combos



An all-stainless steel combination of luminaire ME and Series MV sight glasses. Eliminate the cost of a separate light port by combining the sight glass and light together.

- Integrated LED light
- Operating Voltage: 24 V

- Up to 170 lumens
- 5000K color temperature
- Nominal sizes: DN 65 to DN 125
- Standard unit fitted with momentary push button on/off switch

## METACLAMP with LED Ring Light for Sanitary Viewing & Lighting

- Series SGL LED Ring Light is powerful and compact
- Fits 2-1/2" through 8" MetaClamp sanitary sight windows
- Polished 316 stainless steel housing is NEMA 4X and IP68

- Up to 5 watts producing nearly 400 lumens at 5000K color temperature
- Requires 24VDC and can be run continuously
- Includes 10-meter cable with M8 connector with optional Timer



## MetaPlex® Sanitary Glass-Free Sight Windows



A sight window made from an optical grade polymer formed into a stainless steel ring. It mounts via a sanitary clamp that speeds removal during cleaning. MetaPlex® sanitary windows offer greater toughness and temperature performance. Ideal for food & beverage, brewery, and chemical applications.

- Glass-like transparency with enhanced safety
- Sterilizable with steam, gamma and e-beam
- Suitable for CIP & SIP cycles

- High purity with low leachables
- Up to 100° C normal operating conditions
- ASME BPE Compliant
- Good chemical resistance to acids, alkalis (caustics) and alcohols
- No BPA, BPB or BPXs that contaminate process media
- Sizes: 1 to 4 inches
- Mounting: Sanitary clamp connection

## Obround and Rectangular Sight Glasses

Tall narrow sight glass allows operators to see the level of liquid inside a vessel. Unlike electronic instruments that measure level, a level gauge is simple and fail-safe. The Obround and Rectangular weld-on sight glass can be welded into a pipeline or vessel for accurate flow or level indication.

- Glass: Borosilicate or quartz
- Obround operating temperature: 500° F (260° C) with borosilicate glass, high temperature designs available
- Rectangular operating temperature: 470° F (243° C) with borosilicate glass

- Up to 150 psi
- Complete with fully gasketed glass plate and bolting
- CRN not valid on obround sight glasses
- Obround sizes 1" x 6" to 4" x 24" (view)
- Rectangular sizes: 133 to 1794 mm (5.2" to 70.6") long, 70 mm (2.8") wide
- Materials: stainless and carbon steel, Hastelloy
- ASME code weld pad materials
- Custom built versions available



## Cameras and EX Cameras for Inspection and Remote Observation



Easy to install and perfect for on-site inspections of critical production areas. With our ever-expanding line of EX and Non-Ex cameras we have a solution for every industry. Our line of cameras includes fixed lens, zoom, HD, 4K, and EX rated models to suit all required applications.

### Camera Systems

- EX and Non-Ex ratings available
- Stainless Steel Housing / IP65 rated

- EX Rated: EX Zones 1, 2, 21 and 22 / Groups IIC and IIIC
- Fixed, Zoom and POE Versions
- Up to 4K resolution
- Optional software for various supported web browsers
- Bracket mount or sanitary clamp adapter

## Bubble Traps

Many processes use chromatography that results in by-product gas that must be removed. Our trap provides a sanitary, crevice-free, self-draining means of removing unwanted gas and bubbles from process fluids.

- Glass: borosilicate (acrylic option).
- Pressure: up to 87 PSI @30° C
- ASME BPE compliant. Full traceability on wetted components.

- EHEDG Approved, self-draining, crevice-free design
- Available in stainless steel (Electro Polished) and different alloys
- Sizes: ferrule ports ½" to 2", trap diameter 4" to 10"
- Mounting: clamp connections
- New Clamp Type version available



# Sanitary Clamps

Reliable, fast, leak-free connection to meet BPE and FDA requirements for sterile process control, as well as disassembly, cleaning and reconfiguration.

## Series SH 316 SS Clamp

- Unique profile, twin hinge design
- Pressure: up to 870 psig
- Temperature: 450° F and higher
- Material: 316 stainless steel
- Sizes: ½" to 12"
- Bolt: single or double
- Hinge: 2 pin
- Fastener: wing nut or hex nut
- Standards: CE
- Anti-Gall option
- ASME BPE compliant
- MTR's available



## Safety Clamp

The Safety Clamp protects workers by assuring the bolting mechanism cannot release suddenly while a worker is loosening the bolt.

- Material: 316 stainless steel
- Sizes: ½" to 12"
- Pressure: up to 870 psig
- Temperature: 450° F and higher
- Bolt: safety feature prevents unintentional opening
- Hinge: 2 pin
- Fastener: wing nut or hex nut
- Standards: CE
- Anti-Gall option
- ASME BPE compliant
- MTR's available

## Series SSH High Pressure Clamp

- Unique profile, two bolt design
- Pressure: up to 1,450 psig
- Temperature: 450° F and higher
- Material: 304 stainless steel (316 SS optional)
- Sizes: ½" to 6"
- Bolt: double
- Hinge: none
- Fastener: Hex nut brass or stainless steel
- Standards: CE
- Anti-Gall option
- ASME BPE compliant
- MTR's available



## Series ASME Clamp

- Pressure: up to 2,480 psig
- Temperature: 450° F and higher
- Material: 316 stainless steel (all parts traceable)
- Sizes: 1" to 12"
- Bolt: triple
- Hinge: for ease of assembly
- Fastener: wing nut or hex nut
- Standards: ASME Section VIII Appendix 24
- Anti-Gall option
- ASME BPE compliant
- MTR's available

## Gauge Glass and Replacement Glass



Replacement gauge glass, gaskets and mica shields. Borosilicate glass offers high visual clarity, greater chemical and thermal shock resistance, and high pressure safety. Gaskets and Mica Shields are also available.

- Borosilicate glass
- Temperature: up to 572 °F
- Pressure: up to 6000 psi
- Sizes: 0 through 11

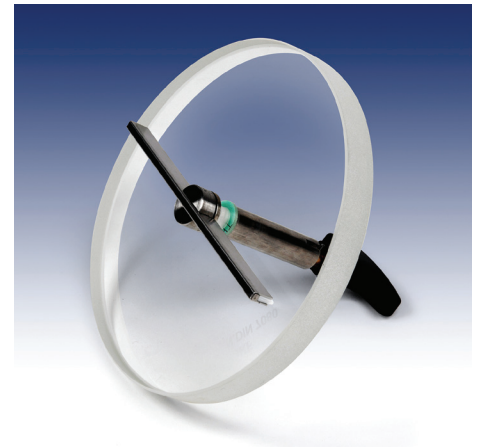
- Special tempered reflex and transparent level gauge glasses and disc sight glasses can be supplied in accordance to:
  - DIN7080/7081
  - BS 3463
  - JIS B 8211
  - MIL - G - 16356 D
  - Auer USA specification
  - Customer specification
  - Aluminosilicate glass on request

## Wiper I & II

Manual wipers for LumiGlas sight glasses and sight windows, such as the DIN28120 style sight glasses.

- For manual cleaning on inside glass surface
- **Wiper I:** vacuum tight and up to 85 psig @ 400 °F (204 °C)

- **Wiper II:** vacuum tight and up to 230 psig @ 428 °F (222 °C)
- 316 stainless steel wetted metal parts
- Wiper blade available in Teflon or Silicone



## Spray Ring for Sight Assembly



- Provides high pressure, 360 degree cleaning of glass
- Unit is inserted between the sight glass and tank flange
- Spray holes are angled independently to clean entire glass surface

- Fits ANSI Flange sizes 2" to 8" (other sizes and types available)
- Materials include stainless steel, carbon steel, Hastelloy® and others
- For liquids or gases compatible with product media



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