Patent Pending

Extremely strong and chemical resistant, MetaPlex® optical-grade polymer windows are encapsulated in a stainless steel frame for use in sanitary processing applications.

Application:

For applications where glass is not desired, MetaPlex view and light ports fit standard sanitary clamp connections sized from 1" through 4". The MetaPlex window can be used as a view port, a light port or as a "cross view" for inline visual flow indication.

Approvals and Technical Data:

- Glass-like transparency with enhanced safety
- Sterilizable with steam, gamma and e-beam
- Suitable for CIP & SIP cycles
- High purity with low leachables. No changes in light transmission and mechanical strength after leachable tests
- Up to 100˚C normal operating conditions
- ASME BPE Compliant
- Grades for medical applications available that pass US/EU/Japan Pharmacopeia, ISO 10993, DMF listed
- Good chemical resistance to acids, alkalis (caustics) and alcohols
- Not compatible with hydrocarbon oils, vegetable oils and milkfat
- No BPA, BPB or BPXs that contaminate process media

MetaPlex View Port for Sanitary Clamp Connection

MetaPlex Light Port with Lumistar1000™ Light

How MetaPlex® Works:

MetaPlex sight ports provide a level of safety and useful service life well beyond that provided by conventional plastic sight windows. It withstands temperatures up to 134˚C, operating temperatures to 100˚C and operating pressures up to 150 PSIG.

The proprietary optical-grade polymer was selected because it reduces outgassing and has low leachables and extractables. Standard ring material is 304 stainless steel with other alloys available.

MetaPlex windows are a polymeric sight glass that can be used during production. Other plastic sight glasses are meant for short-term use during validation, process development and engineering applications, but MetaPlex can be used in production and cleaning cycles.

Patent-pending MetaPlex windows are formed by injecting the polymer into a precisely designed metal ring, which eliminates the dangerous weak point of the thin section of a conventional all-plastic sanitary window. There are no epoxies, resins, or glues between the polymer and metal.

MetaPlex windows are designed with a proprietary interlocking seal against the clear polymer, so the process media comes into contact with a single material. This is vital in sanitary service, as it eliminates crevices where contaminants can collect and micro-organisms can grow.

The metal ring takes the stress of clamp assembly and disassembly, reducing the risk of chipping and cracking. The result is a uniform combination of a polymer and metal that provides excellent optical characteristics with greatly enhanced mechanical strength.

Unlike others, MetaPlex windows offer simple and fast installation because of its sleek, compact, one-piece design. In addition, there is no risk of glass fragments infiltrating the process media. MetaPlex units can replace glass sight windows for applications where glass cannot be used. The polymeric window does not fragment, chip or break in small pieces, which is ideal for use in food and beverage manufacturing processes.
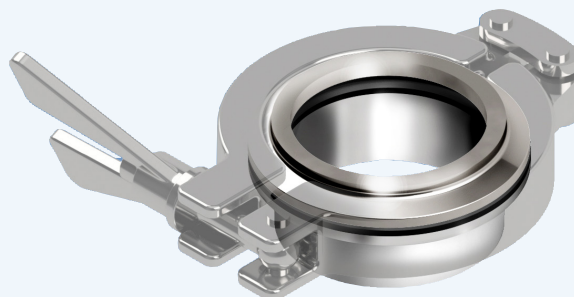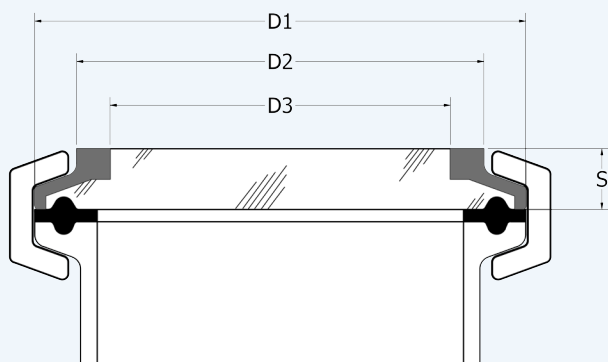
MetaPlex® is a registered trademark of L.J. Star Incorporated.
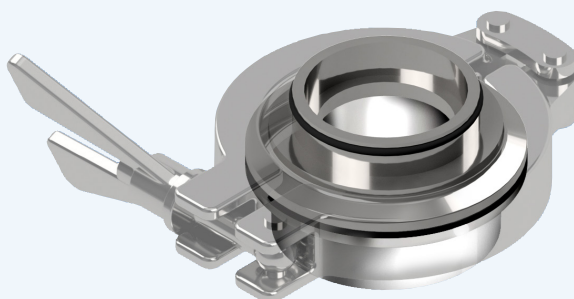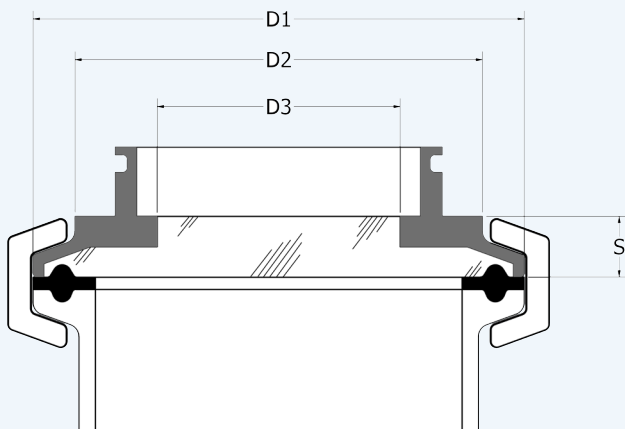
MetaPlex® Sanitary Sight Window & Light Port

VIEW PORT

VIEW PORT	PART #	D1		D2		D3		S		PRESSURE PSIG
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	
1"	METAPLEX 1R	1.98	50.39	1.67	42.49	1.22	31.09	0.31	7.90	150
2"	METAPLEX 2R	2.52	63.91	2.09	53.01	1.74	44.30	0.31	7.90	150
3"	METAPLEX 3R	3.58	90.91	2.76	70.00	2.39	60.63	0.31	7.90	60
4"	METAPLEX 4R	4.68	118.92	3.97	100.84	3.29	83.46	0.31	7.90	30

LIGHT PORT

LIGHT PORT	PART #	D1		D2		D3		S		PRESSURE PSIG
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	
1"	METAPLEX 1R33	1.98	50.39	1.67	42.49	1.22	31.09	0.79	19.99	150
2"	METAPLEX 2R33	2.52	63.91	2.09	53.01	1.22	44.30	0.67	16.89	150
3"	METAPLEX 3R35	3.58	90.91	2.76	70.00	1.74	44.30	0.67	16.89	60
4"	METAPLEX 4R35	4.68	118.92	3.97	100.84	1.74	44.50	0.67	16.89	30