



## **PARSON ADHESIVES, INC.**

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### **PARLITE<sup>®</sup> 4488** **UV Curable Optical Adhesive**

PL-4488 is a clear, colorless, liquid photopolymer that will cure when exposed to ultraviolet light. It is specifically designed to produce very rigid bond for the accurate positioning of lenses, prisms, and optical components.

#### **Feature:**

- Easy to use one part system, eliminates drying and heat curing
- Curing time is remarkably fast, and is dependent upon thickness applied and the amount of UV light energy available.
- High transition temperature allows minimal movement during heat cycles.

#### **Advantages:**

- Excellent clarity, low shrinkage, and a slight flexibility make it superior to other materials for optical bonding.
- PL-4488 exhibits good resistance to temperature extremes and high humidity.
- PL-4488 cures by exposure to UV light with maximum absorption within the range of 350-380 nanometers.

#### **Application:**

- The adhesive is designed to give the accurate positioning of lenses, prisms and optical components.
- Excellent adhesion to glass to itself and wide variety of metals. PL-4488 is recommended for fiber optic applications such as butt bonding, bundling and splitting.

## Specifications of PL-4488

### Liquid Properties

Composition	Urethane Methacrylate
Appearance	Clear liquid
Viscosity	5,000 cps
@25 °C 20-rpm Brookfield	
Specific Gravity	1.2
Flash Point	> 95 °C
Toxicity	Low

### Cured Properties

Refractive Index	1.520	
Glass Transition temperature	>120 °C	
Elongation at breaks	3%	ASTM D-638
Tensile Strength	4000 psi	ASTM D-638
Hardness Durometer	D 85	ASTM D-2240
Boiling water absorption	2.8%	ASTM D-570
Water absorption (24h)	1.2%	ASTM D-570
Shrinkage on cure	1.4%	
Young Modulus	1.6 x 10 <sup>5</sup> psi	ASTM D-638

### UV Curing System

Lamp Type	5" x 5" Flood	3/16" Spot	1" x 6" Focused
Max. Lamp Intensity @ 365 nm	300 mW/cm <sup>2</sup>	4000 mW/cm <sup>2</sup>	8000 mW/cm <sup>2</sup>
Adhesive Absorption Range (nm)	300 - 500	300 - 500	300 - 500
Cure Speed (Sec)			
Glass to Glass Bonding	3	6	<1
Surface Cure Speed	7	7	<1

**RECAUTIONS:** This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the material.

**Warranty:** All products purchased from or supplied by Parson are subject to terms and conditions set out in the contract. Parson warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Parson is considered accurate but is furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Parson makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.