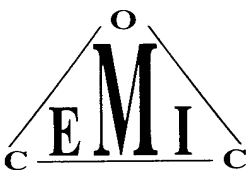
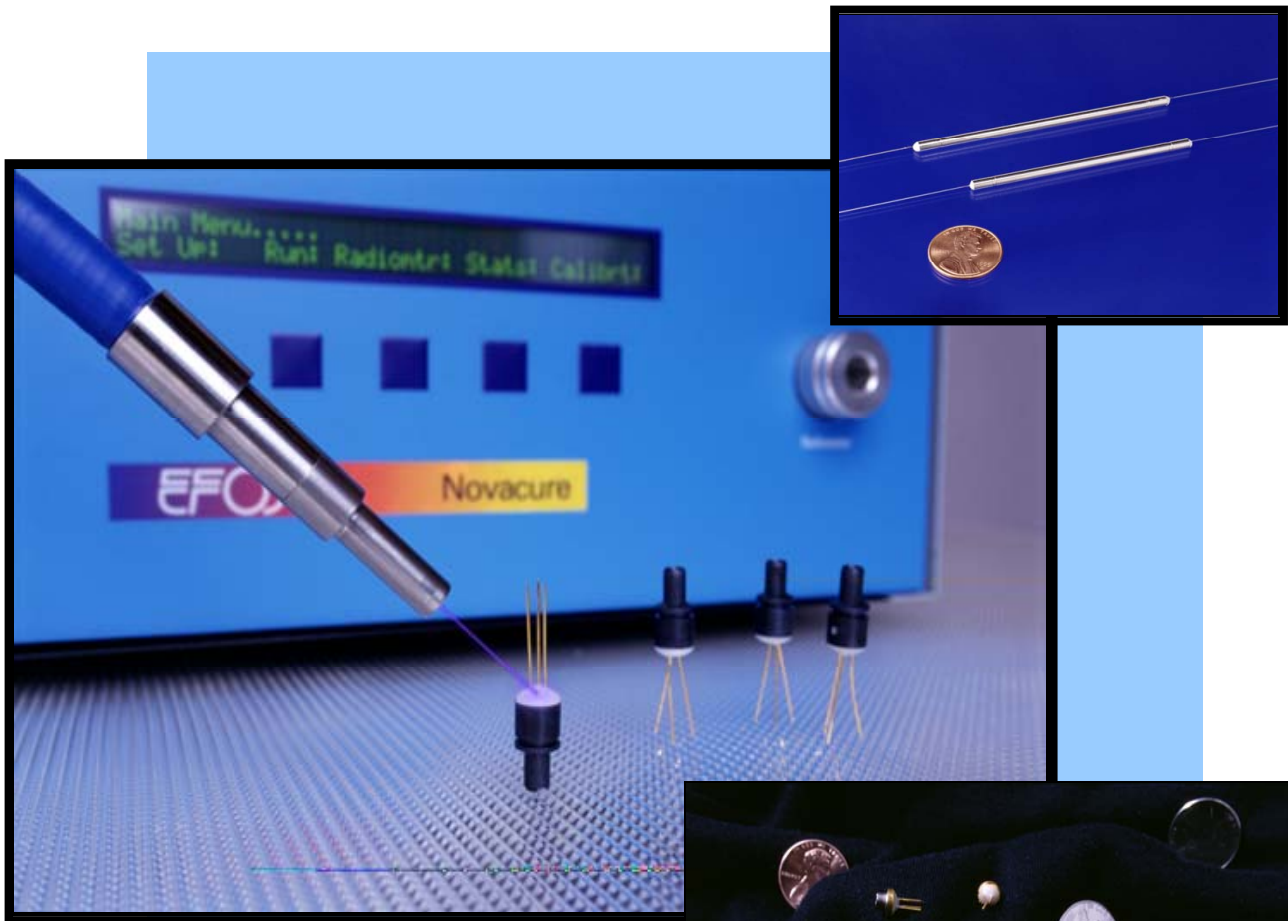


OPTOCAST Adhesives

For Opto-Electronics



Electronic Materials Inc
an ISO 9001 registered company.

Revision Date: 01/2001

Long Recognized as the World Leader in UV cured Epoxies, Electronic Materials, Inc. offers the complete line of OPTOCAST Adhesives/ Encapsulants/ Coatings. All OPTOCAST™ materials are designed for fast precise bonding of optical and electronic components or devices. Featuring low stress, optical clarity, minimal shrinkage upon cure, very low coefficient of thermal expansion (C.T.E.) values, and excellent moisture resistance, the OPTOCAST family represents the “next generation” of adhesive systems designed for the demanding applications of opto-electronics. Including single component UV, UV & thermal cure systems, and two component systems, there is an OPTOCAST product for virtually any conceivable opto-electronic application.



Features

- Fast cure
- No primers required
- Little or no odor
- Low CTE
- Low shrinkage
- Low outgassing
- Low Ionics
- Low water absorption

Benefits

- Allows for high speed production and automated processes
- Less chance for errors and faster process
- Better manufacturing environment
- Maintain stability of alignments throughout temperature cycling
- Maintain critical alignments during cure
- Prevents contamination inside sealed or hermetic packages
- Prevents corrosion or contamination
- Good performance in high temperature / high humidity Environments

Product Descriptions

The OPTOCAST 3400 series materials are highly filled epoxy systems that can be cured with UV or thermal energy. They are ideal for bonding and fixturing. All feature low CTE and minimal shrinkage upon cure.

OPTOCAST 3400

Very low shrinkage upon cure and very low C.T.E. For fixturing and maintaining critical alignments, low stress and high Tg.

OPTOCAST 3408

Very low CTE and high Tg contains maximum particle size of 12 microns

OPTOCAST 3410

Very low shrinkage on cure. High Tg.

OPTOCAST 3411

Low C.T.E. and a very flowable viscosity.

OPTOCAST 3415

Lowest C.T.E. and shrinkage available.

OPTOCAST 3421

Low CTE, viscosity and shrinkage upon cure. More flexible for better adhesion to some substrates.

OPTOCAST 3440

Two component material with very low shrinkage and CTE, can be UV or thermally cured

The OPTOCAST 3500 series materials are single component UV cure epoxy systems with excellent optical properties. Most 3500 series products are also available with a secondary thermal cure mechanism designated as HM.

OPTOCAST 3505

The original UV cure epoxy for opto-electronic uses. Very low viscosity and high Tg.

OPTOCAST 3506

A lower Tg and higher viscosity version of 3505. Use where a lower modulus is needed.

OPTOCAST 3507

A higher viscosity version of 3505 where less flow is needed.

OPTOCAST 3514

A very soft but durable epoxy for sealing & encapsulating.

OPTOCAST 3553

The newest member of the 3500 family, exhibiting excellent moisture resistance and bond strength.

OPTOCAST 3553-UTE

A variation of 3553 designed to cure in sections less than 20 microns

The OPTOCAST 3600 series materials are thermal cure epoxy systems designed for applications which can not utilize UV cure procedure.

OPTOCAST 3601

A clear, two component optically low viscosity and durable epoxy that is hard but not brittle.

OPTOCAST 3602

A lower viscosity and slightly softer version of OPTOCAST 3601, which is durable.

OPTOCAST 3653

A two component epoxy designed for high temperature applications, OPTOCAST 3653 has excellent resistance to moisture and many types of chemicals and solvents.

OPTOCAST 3663

A single component version of OPTOCAST 3653

The OPTOCAST 3700 series materials are single component UV and/or thermal cure acrylic pre-polymers. They cure extremely quickly and adhere well to various substrates.

OPTOCAST AC-3723 Series

A 4 member family of liquid pre-polymers for sealing, coating, bonding, or encapsulating. Members differ in viscosity – from free flowing liquid to high viscosity gel.

OPTOCAST AC-3724 Series

A 4 member family of liquid pre-polymers which have higher flexibility, lower hardness, lower Tg and higher elongation than that of the AC-3723 Series

OPTOCAST AC-3741

A high viscosity material with low CTE & excellent thermal cycle performance

OPTOCAST AC-3761

Low viscosity, High Tg for coating or encapsulating

OPTOCAST AC-3762

An acrylated epoxy based flexible adhesive with good adhesion to polycarbonate CAB, PMMA, ceramic and metal.

Typical Properties

OPTOCAST	Color	Viscosity - cps.	Storage Conditions	Hardness REX D	C.T.E.	Refractive Index ¹	Elongation	Tg - C°	Max. filler size	Cure Method
3400	Gray	175,000	-20°C	90+	18	N/A	2%	>150	100	UV/Thermal
3408	Gray	40,000	-20°C	90+	16	N/A	2%	>150	12	UV/Thermal
3410	Gray	95,000	-20°C	90+	14	N/A	2%	>150	24	UV/Thermal
3411	Gray	17,000	-20°C	90	19	N/A	3%	>150	100	UV/Thermal
3415	Gray	100,000	-20°C	90	12	N/A	2%	>150	80	UV/Thermal
3421	Gray	20,000	-20°C	88	19	N/A	8%	115	100	UV/Thermal
3440	Gray	45,000 mixed	-20°C	90+	24	N/A	2%	150	24	UV/Thermal
3505	Clear	350	RT	88	65	1.517	3%	145	N/A	UV
3506	Clear	850	RT	81	65	1.52	12%	120	N/A	UV
3507	Clear	1,000	RT	88	65	1.52	3%	145	N/A	UV
3514	Clear	8,000	RT	A-80	65	1.495	100%	-10	N/A	UV
3553	Clear	1,000	RT	88	60	1.512	4%	145	N/A	UV
3553-UTF	Clear	800	RT	88	60	1.513	4%	145	N/A	UV
3601	Clear	Mixed 1,800	RT	90	55	1.53	2%	130	N/A	Thermal
3602	Clear	Mixed 1,000	RT	84	65	1.54	15%	65	N/A	Thermal
3653	Amber	Mixed 3,000	RT	85	55	1.563	15%	120	N/A	Thermal
3663	Amber	4,000	0°C	85	55	1.54	15%	100	N/A	Thermal
AC-3723 series	Clear	2,000-250,000	Shelf	75	80	1.48	25%	40	N/A	UV/Thermal
AC-3724 series	Clear	2,000-250,000	Shelf	57	75	1.49	75%	36	N/A	UV/Thermal
AC-3741	White	110,000	-20°C	78	18	N/A	20%	100	24	UV/Thermal
AC-3761	Clear	450	Shelf	85	60	1.52	10%	90	N/A	UV/Thermal
AC-3762	Clear	5,000	Shelf	63	72	1.51	45%	55	N/A	UV/Thermal

¹@850nm

* For detailed technical information on moisture resistance properties of OPTOCAST materials please refer to EMI Technical Service Report TSR #15.

All data in this bulletin is based on our own research and the research of others. They are believed to be accurate, however no guarantee of accuracy is made. Product description is sold without warranty except conformity to specification and on condition that the purchasers shall determine suitability for their particular purpose.



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