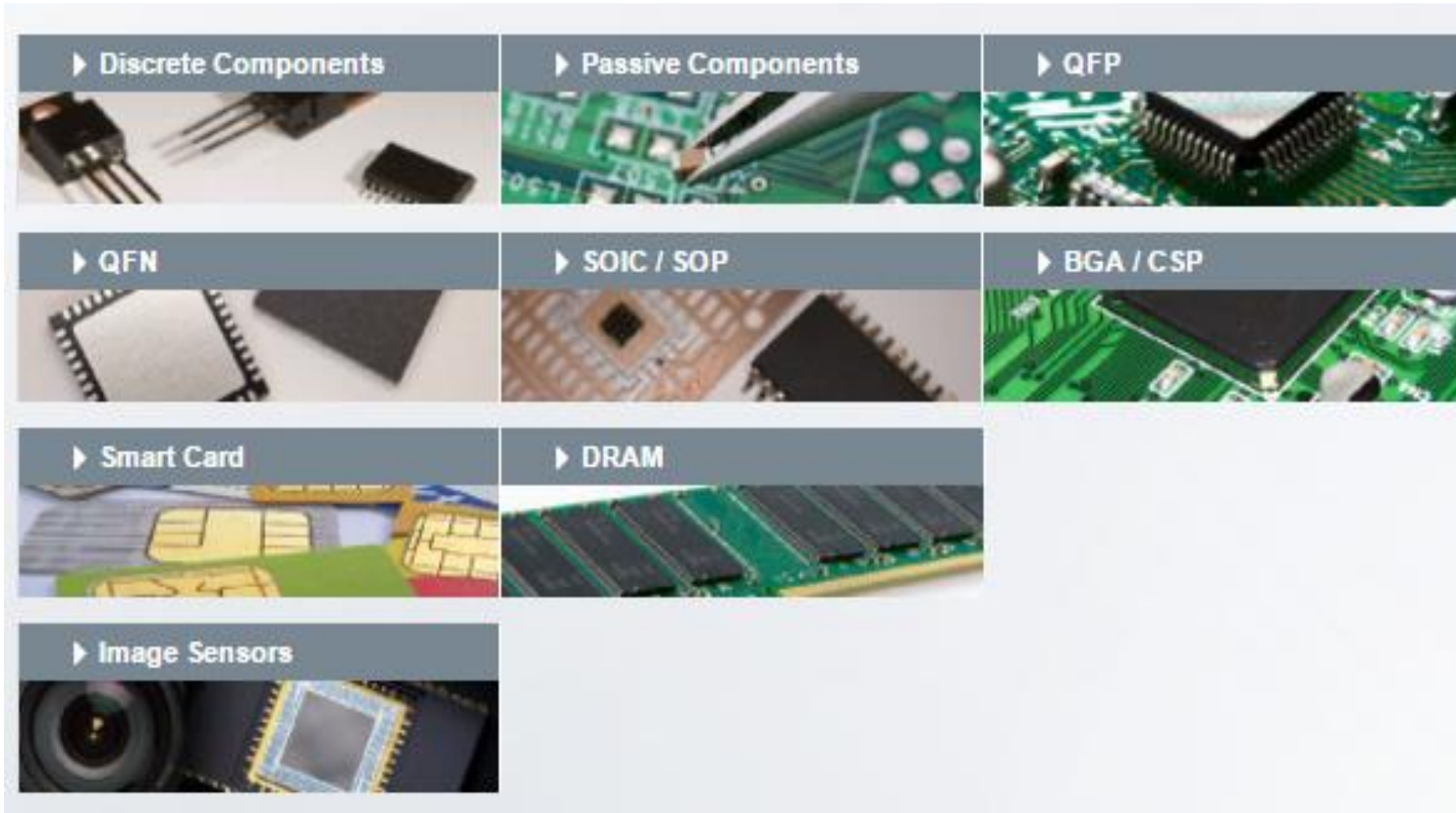
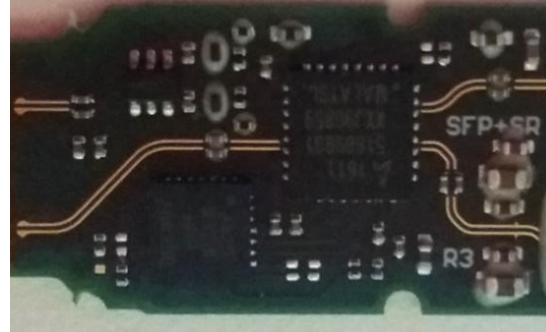


# Semiconductor Packages

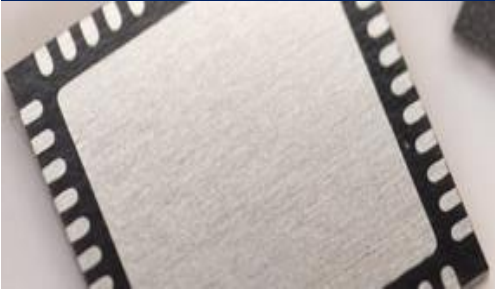


# Passive Components Assembly



Category	Product Code	Description	Application
Conductive Die Attach	AG 803, AG 806 AG 830-12, AG824	Silver Epoxy	Use for the termination and connections points
Encapsulant	EN 453, EN 485 EN 525, EN 690 EN 943-19	Epoxy and Silicone Chip on Board	Micro-miniature surface mount Tantalum(Ta)capacitors and wire encapsulant
Chip Bonding	CB 603-2 CB 648-2 CB 643-3	Epoxy	To bond the miniature component on board

# QFN Package Assembly



Category	Product Code	Description	Application
Thermal Adhesive	TH 670 TH 732-1 TH 737-1 TH 737-6 TH 974	Thermal Conductive Epoxy &Silicone	Die Attach materials employed will most likely be thermally conductive.
Thermal Pad	TH 211-2 TH 211-3 TH 996-1 TH 935-2 TH 221-3 TH 223-1 TH 228	Thermal Conductive Non- silicone Silicone	Underneath the device as opposed to protruding from the sides. The QFN package also includes an exposed thermal pad, which enhances the ability of this package to remove heat from the IC.

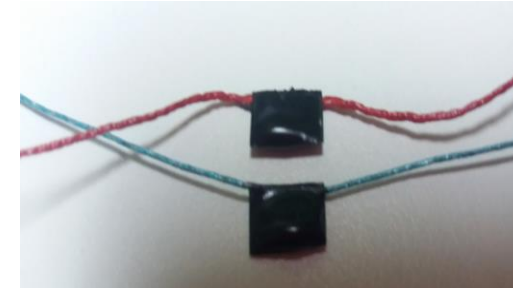
# BGA/Flip Chip Package Assembly



Category	Product Code	Description	Application
Underfill	UF 256 UF 253-1	Epoxy	Underfills are used to protect the solder connections and provide low CTE cushion.
Dam	CB 644 DA 669-4 EN 418-2	Epoxy	Dam for underfill or any chip filling.
Fill	EN 418-12 EN 690 EN479-5 (dam) EN690-5 (fill)	Epoxy	Fill for the semicon chip

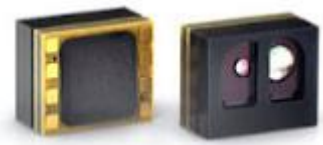
Reliability Stress Conditions		
Autoclave	1008 hours	121°C / 100% RH, 2 atm
Temp. Cycle	1000 cycles	-65°C / +150°C
Thermal Shock	300 cycles	-55°C / +125°C

# Smart Card/DRAM/RFID Package Assembly



Category	Product Code	Description	Application
Encapsulant	EN 453, EN 485 EN 525, EN 943-19	Epoxy & Silicone	Encapsulants are used to protect the electronic assembly.
UV bonding	UV 200 UV 367 UV 767 series UV 252 UV 257-2	UV Snap Cure epoxy & Acrylate	Bond the chip on card & Snap cure sealant for lip attach

# CMOS/Image Sensor Assembly



ToF Image Sensor Module



3D Image Sensor Module  
(RGB front camera, IR Projector, IR stereo Camera)

Category	Product Code	Description	Application
UV/Heat Curable Epoxy	UV358-9 UV705 series	Epoxy & Acrylate	Fast cure, precise position and bondline control with UV transparency adhesives to bond the lens to the mold compound.
Dam & Fill	CB644 EN641, EN690	Epoxy	Dam & fill for the CMOS sensors



# Photolithography Machine and other equipment adhesive usage application



# Product Focus and Application

## IR MATCHING UV+ Heat Curable adhesive (Active Alignment)

UV784-3 (RI1.489) D26 Soft

UV784-4 (RI1.504) D52 Moderate Hardness

UV784-5 (RI1.527) D70 Hard

UV773-6 (RI1.506) Highly sensitive active alignment

UV781-2 (RI1.41) Low RI active alignment

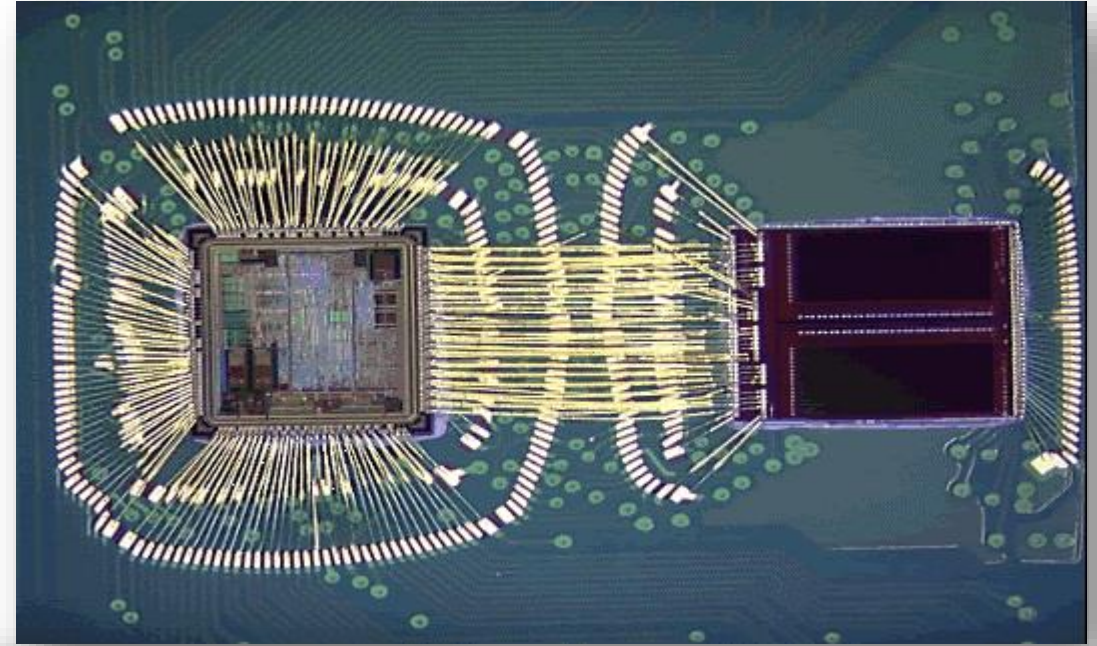
UV228 (RI1.41) Low RI active alignment

## Heat curable Adhesive (Low temperature curable)

EN418-2 (Low CTE, Non-flow)

EN418-12 (Low CTE, Flow)

EN416-8 (Low CTE, Non-flow, Red)





# Product Focus and Application

## Heat curable (Structural bonding)

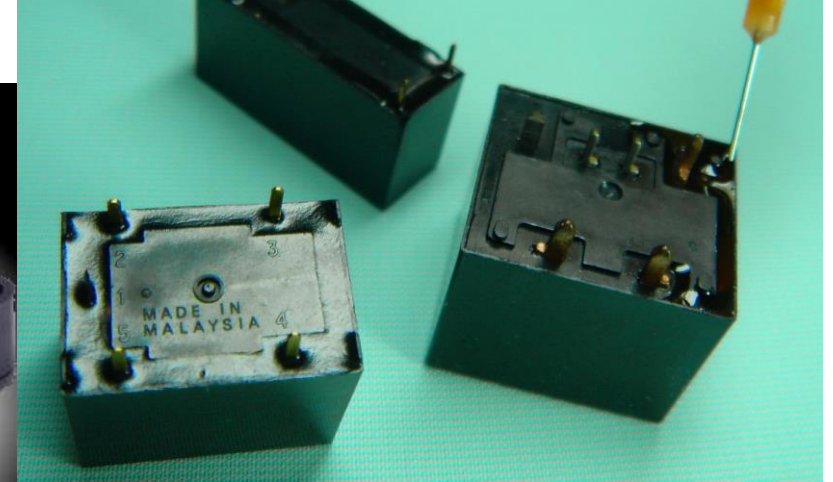
GL168 (High Tg)

GL168-3 (Low CTE)

GL158 (High Tg)

EN525 (Epoxy Encapsulant)

EN485 (Epoxy Encapsulant –Higher Thixo)



## Thermal Interface Material

### Silicone Thermal Pad

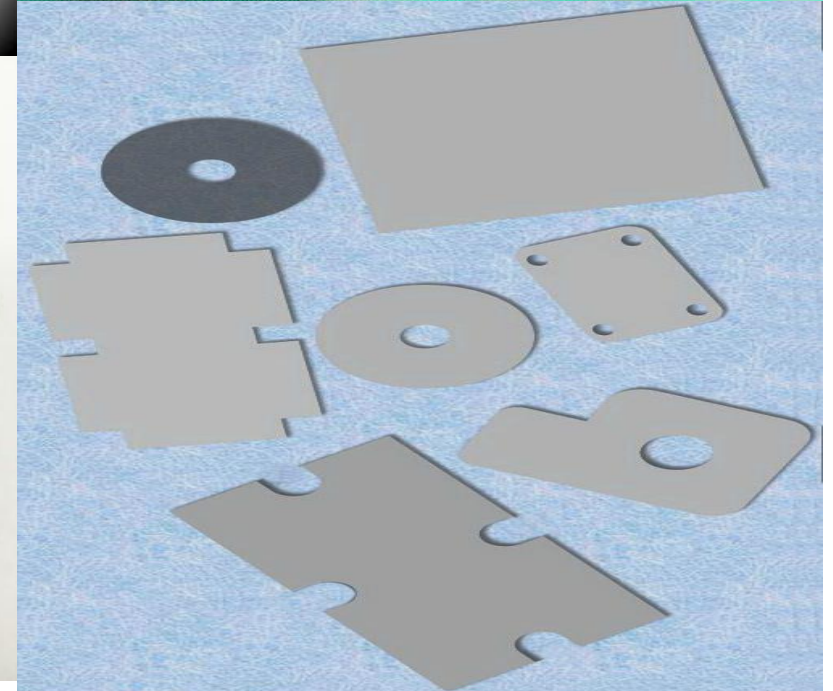
TH817 (Silicone: TC17W/mk to release)

TH949 (Silicone; TC11W/mk)

TH994 (Silicone; TC:8W/mk)

TH838 (Silicone: TC:7W/mk)

TH832 (Silicone; TC:3.5W/mk)



### Non-Silicone Thermal Pad

TH226 (Non-silicone; TC:12W/mk)

TH228 (Non-silicone; TC: 8W/mk)

TH223-1 (Non-Silicone; TC:7W/mk)

TH220 (Non-Silicone; TC:3.1W/mk)

TH221-3 (Non-Silicone; TC:1.5W/mk)



# Product Focus and Application

## Thermal Interface Material

### Thermal Putty

TH949-1 (Silicone; TC: 12W/mk to release)

TH885-3 (Silicone; TC: 8W/mk)

TH855-1 (Silicone; TC: 7.5W/mk)

TH930 (Silicone; TC: 4.3W/mk)

TH235-2 (Non-Silicone; TC: 4W/mk)

### Thermal Potting

PT605 (Epoxy; TC: 1.1W/mk)

## Camera Sensor and Modules

### UV Cure Only

UV767-3 Translucent

### UV + Heat Cure

UV777-6 Transparent

UV791-1 Black Color

### Heat Cure Only

CB603-2 Black color

EN418-2 Black color



# Product Focus and Application

## EMI Shielding and Silver Epoxy

### EMI Shielding

EMI120-1

EMI 122

### EMI Sprayable Epoxy

EMI121

### Silver Conductive Epoxy

AG824 (High Tg)

AG803-2

AG823 (Low Temp Curable)

### Screen Printable Conductive Circuit

AG829-1 Sprayable

