



GENERAL INFORMATION

- All thermal test chip wafers are supplied on six-inch diameter, 635μ (0.025"±0.001") thick wafers, and only whole wafers can be purchased. (See Chip Ordering Information for pre-sawn unit cells and arrays.)

WAFER TYPES

- Wire Bond** – unbumped with connection metallization across scribe lanes so only periphery wire-bonding is required (See Thermal Test Die Physical Information sheet for pad dimension and material details.)
- Bumped** – standard bump wafers have isolated unit cells so that each cell can be connected separately (See Thermal Test Die Physical Information sheet for bump dimension and material details.)

Pricing: Minimum wafer order is two wafers.

Wafer Quantity	Wire Bond	Bumped
2 through 9	\$3,550.00	\$4,450.00
10 through 24	\$3,350.00	\$4,200.00
≥ 25	Please contact TEA	Please contact TEA

WAFER THINNING (quoted on a custom basis)

- Standard thinning is offered down to nominal 300μ (0.012") – specify thickness requirement

WAFER BACKSIDE METALIZATION (quoted on a custom basis)

- Standard offerings are:

Soft Solder Die Attach	Conductive Epoxy Die Attach	Direct (Eutectic) Die Attach
Ti-Ni-Ag ~ 1000Å Titanium ~ 3000Å Nickel ~ 3000Å Silver	Au alloyed into silicon 1000 – 2000Å Gold* * Specify required Gold thickness	Au alloyed into silicon 7000 – 10000Å Gold* * Specify required Gold thickness

- Other metallization combinations available on custom basis – specify requirements.

WAFER SAWING (quoted on a custom basis)

- Standard offering is for one array (chip) size unless otherwise noted; various array sizes from wafer are possible – specify requirements.
- Sawn wafers available on membrane expanded ring for pick and place applications. (\$35 refundable deposit required for expanded ring.)
- Individual chips are available in a waffle pack or in tape/reel configuration.

PURCHASING INFORMATION

- All prices are in US\$ and are subject to change without notice.
- Minimum order quantity is **two** wafers
- All orders require a 50% deposit
- Shipment - All products will be shipped ExWorks Santa Clara, CA. Freight charges are the responsibility of the purchaser.
- Delivery

In-stock wafers will be shipped within two to three weeks ARO

Out-of-stock wafers will be shipped within thirteen (13) weeks ARO

Disclaimer

Thermal test chips are offered for use in characterizing assembly processes, packages, materials and any other applications requiring precise control of heat flux generation and temperature measurement. Applying the data from the test die to a functional system is the responsibility of the user. TEA makes no warranty, express or implied including the implied warranties of merchantability and fitness for a particular purpose, that the user's system designed using that data will perform as intended by the user.