Wafer Level Image Sensor Package with Die Receiving Cavity

and Method of the Same

ABSTRACT OF THE INVENTION

The present invention provides a structure of package comprising a substrate with a die receiving cavity formed within an upper surface of the substrate and a through holes structure formed there through, wherein a terminal pads are formed under the through holes structure and the substrate includes a conductive trace formed on a lower surface of the substrate. A die is disposed within the die receiving cavity by adhesion and a dielectric layer formed on the die and the substrate. A re-distribution metal layer (RDL) is formed on the dielectric layer and coupled to the die and the through holes structure. Conductive bumps are coupled to the terminal pads. An opening is formed within the dielectric layer and a top protection layer to expose the micro lens area of the die for Image Sensor chip. A protection layer (film) be coated on the micro lens area with water repellent and oil repellent to away the particle contamination. A transparent cover with coated IR filter is optionally formed over the micron lens area for protection.

(Fig. 1)