

Nokia 2330 Camera Module

Toshiba VGA CIS WLP

Anteryon WL-Optic

Reverse Costing Analysis



Physical Analysis of the Camera and the CMOS Image Sensor

Step by Step Reconstruction of the Process Flow

Cost of Manufacturing and Estimation of Selling Price

System Plus Consulting is proud to publish the reverse costing report of the VGA Camera Module supplied by Toshiba for the Nokia 2330 mobile phone.

This camera module integrates an $2.2\mu\text{m}$ pixel CMOS Image Sensor (CIS) from Toshiba. The CIS die is manufactured using a CMOS technology with a $0.18\mu\text{m}$ process.

The module is Wafer-Level Packaged (WLP) using a TSV "via last" technology.

The optical module comes from Anteryon and is manufactured with a wafer-level approach.

This report provides complete teardown of the camera module with:

- Detailed photos
- Material analysis
- Schematic assembly description
- Manufacturing Process Flow
- In-depth economical analysis
- Manufacturing cost breakdown
- Selling price estimation

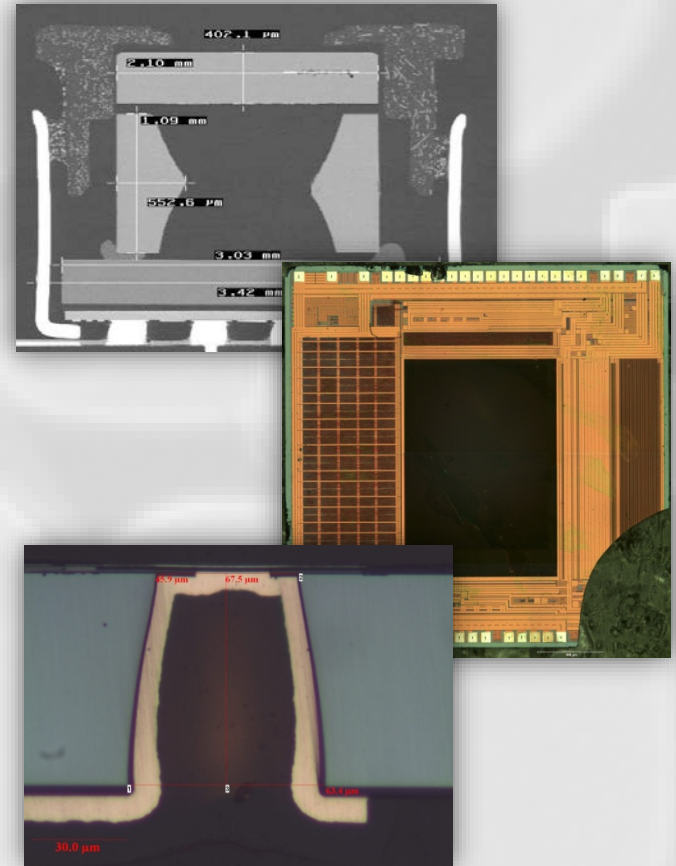


TABLE OF CONTENTS (~110 pages)

Glossary

Overview/Introduction

- Executive Summary
- Reverse Costing Methodology

Companies Profiles

- CMOS Image Sensors – Volume Shipments
- Toshiba Profile
- Anteryon Profile

Nokia 2330 Teardown

Physical Analysis

- Camera Module Views & Dimensions
- Camera X-Ray
- Camera Module Disassembly
- CIS Views & Dimensions
- CIS Markings
- CIS Bonding
- CIS Microlenses
- CIS Pixels
- CIS Back view
- Camera Module Cross-section
- Package Cross-section
- Optical Module Cross-section
- CIS Packaging Cross-section
- CIS Cross-section

Manufacturing Process Flow

- CIS Process Flow
- CIS Wafer-level packaging Process Flow
- Description of the CIS Wafer Fabrication Unit
- WL-Optic Process Flow
- Description of the WL-Optic Wafer Fabrication Unit

Cost Analysis

- CIS FEOL + BEOL Cost
- CIS Front-End Cost
- CIS Back-End 0 : 1st Probe Test & Optical Test
- CIS WLP Cost
- CIS WLP Cost per Process Steps
- CIS WLP : Equipment Cost per Family
- CIS WLP : Material Cost per Family
- CIS Die Cost
- WL-Optic Front-End Cost
- WL-Optic Cost per Process Steps
- WL-Optic : Equipment Cost per Family
- WL-Optic : Material Cost per Family
- WL-Optic : Test, dicing and assembly
- WL-Optic Price
- Back-End : Final Packaging & Test
- Camera Module Cost (CIS + WLO + Packaging)

Estimated Price Analysis

Conclusion

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