



- Notes: 1) Contactless thickness measurements are especially useful during backside thinning.  
 2) Rs measurements help to verify uniformity of front- and backside blanket metallization thickness.  
 3) Rs and thickness measurements are helpful for GaN LED production (especially with monitoring of each layer (P & N) while depositing on Sapphire substrates).

## Application Analysis Form

Company: \_\_\_\_\_ Contact: \_\_\_\_\_

Location: \_\_\_\_\_ Phone/Fax: \_\_\_\_\_

Email: \_\_\_\_\_ Sales Agent: \_\_\_\_\_

### Area of Interest

#### 1500 Family

- 1500 Manual
- 1510 Standalone
- 1510 RP
- 1510 RS

#### 1600 Family

- 1600 Manual
- 1610
- 1610 RP

#### Mercury Probe

- 2017
- 2017B

#### Miller Profiler

- 2000 (100V bias)
- 2019 (200V bias)

#### Flat Panel

- 1500LS
- 1530A

#### 300mm

- RS300
- Standalone

#### Other

- 1300C
- Contactless Thickness

Details: \_\_\_\_\_

### Sample Information

Wafer Type: \_\_\_\_\_ Diameter(s): \_\_\_\_\_

Thickness: \_\_\_\_\_ Sheet Resistance: \_\_\_\_\_

Resistivity : \_\_\_\_\_ Mobility: \_\_\_\_\_

Sheet Charge Density: \_\_\_\_\_

- Epi
- Ion-implant
- Metal

## Measurement Requirements

Parameter	Range	Accuracy	Repeatability

### Sample Information

Wafer Structure:

**NOTE:** (include sheet resistance/resistivity/dopant density and thickness for each layer)

### Purpose of Measurement

How do you currently handle these measurements? \_\_\_\_\_

What measurement system are you now using? \_\_\_\_\_

What improvements would you like to see over your present method? \_\_\_\_\_

### Total Cost of Ownership/Misclassification

Number of Measurement sites per measured wafer: \_\_\_\_\_

Wafers Measured per month: \_\_\_\_\_

Cost of Failing a Good Wafer: \_\_\_\_\_

Cost of Passing a Defective Wafer: \_\_\_\_\_

Upper Specification Limit, USL, for measured property: \_\_\_\_\_

Lower Specification Limit, LSL, for measured property: \_\_\_\_\_

Process Capability for Sheet Resistance,  $C_p$ : \_\_\_\_\_

where  $C_p = (USL-LSL)/(6 \text{ sigma})$

sigma = one standard deviation of the Sheet Resistance