Comparison for UV Sensors of Genicom's GaN-based and Si Lab's Si-based

1. Purpose: Test for accurate UV Index measurement

2. Test sample

1) Reference UVI meter : Solarmeter 6.5 (Solartech Co.)
2) GaN-based UVB sensor : MG-07 UVI meter (Genicom Co.)
3) Si-based UV sensor : Si1145 (Silicon Labs Co.)

3. Test Results

Light source	Ref. value	UVB sensor (MG-07)		Si1145 (Silicon labs)		Remark
Sun (Clear sky)			Accurate		Error : > 40%	Large error

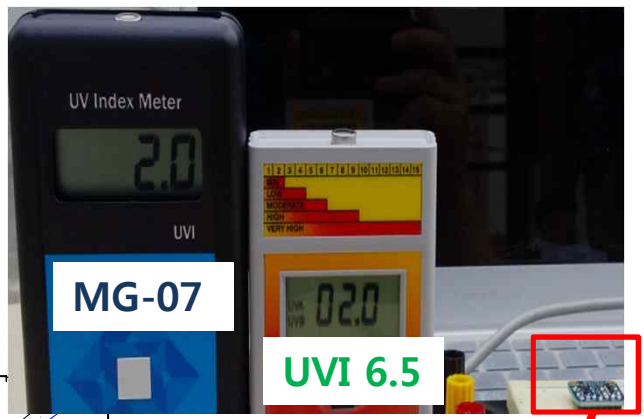
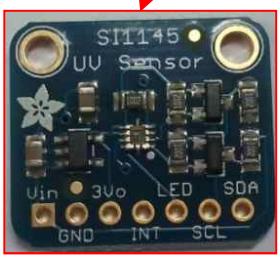


Fig. 1 Test scheme



Si1145

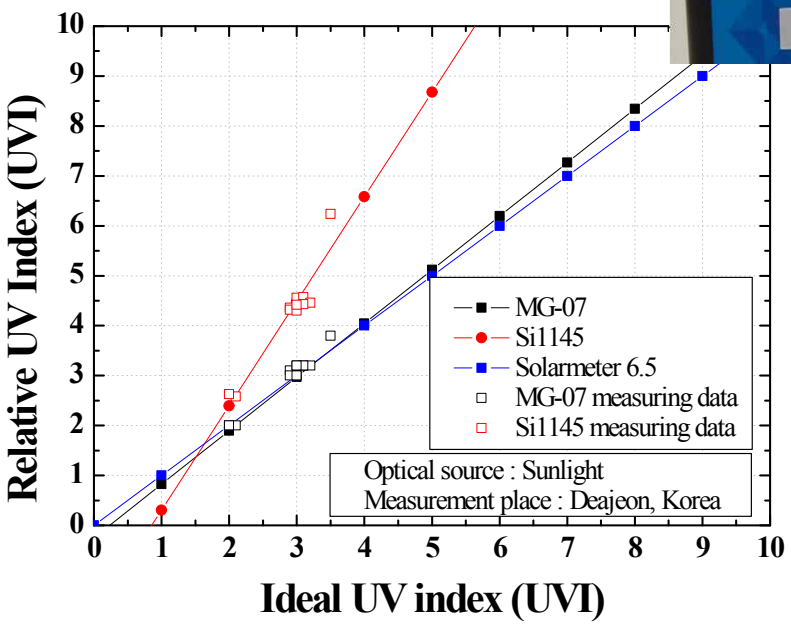
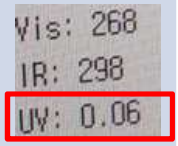
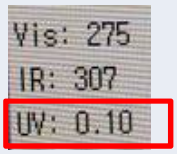
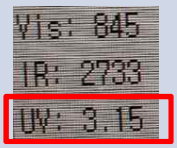
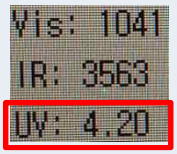
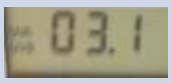
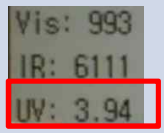


Fig. 2 Measured UV Index data for sun light

Light source	Ref. value	UVB sensor (MG-07)		Si1145 (Silicon labs)	
UVB lamp (305nm peak)			Normal operation		No response for UV ray **Error**
UVA lamp (352nm peak)					No response for UV ray **Error**
3-lambda lamp			**No response for visible ray** **(Normal operation)**		Response for visible ray **Error**
White LED					Response for visible ray **Error**
Sun light **(UV cut by acryl plate)** 	**No UV cut**  **UV cut** 	**No UV cut**  **UV cut** 	**No response for UV cut**	**No UV cut**  **UV cut** 	Response for UV cut. **Error**

4. Conclusion

1) **Genicom's UVB sensor is very accurate and show normal operation for various environment.**
2) **Si Lab's Si1145 sensor has large error and show abnormal operation for various light sources due to just detection of visible and IR ray. It's just visible sensor not UV sensor.**