

Detector Integrated with SiPM Frequently Asked Questions

Q: What are the different 2X2NaI(Tl)-ANALOG part numbers?

A: S690-1065-XX-00

Part Number	PHR
690-1065-04-00	≤9.5%
690-1065-12-00	≤8.5%
690-1065-16-00	≤7.5%

Q: What is typical lead-time?

A: An existing 2X2NaI(Tl)-ANALOG part number is 8 to 12 weeks. Currently the SiPM integrated detectors are being built by R&D / Engineering. Once these are transferred to full production lead-time should drop to 4 - 6 weeks. New designs are 12 - 14 weeks

Q: What SiPM do we use

A: We use the SensL J-series

Q: Mechanical question specific to the SiPM

A: SensL would be better suited to answer question

Q: Which scintillator types are available with SiPM?

A: currently only NaI(Tl)

Q: At the end, we would like to get TTL signal from individual detected photons. If the sensor provides the TTL signal can it be read in parallel with the analog I-V preamp output?

A: You cannot have both analog and TTL out at the same time. It has to be one or the other.

Q: Would we need an external discriminator or does the sensor provide this by default? (pin 3 TTL Out?)

A: In the 2X2NaI(Tl)-ANALOG configuration there is a need for an external discriminator. However, we do have the option of providing a version of the detector with a built in discriminator.

Q: What functionalities OUTPUT ADAPTER, SiPM ANALOG, USB provides and what is the CAP SUB-ASSEMBLY?

A: It provides a quick adapter for testing and MCX connector.

Q: Detector has a gain self-adjusting algorithm, but in our application we fine tune the gain with a self-regulating loop. We would like to be able to apply the same method. In the manual it is not described how to set gain: how can we change it?

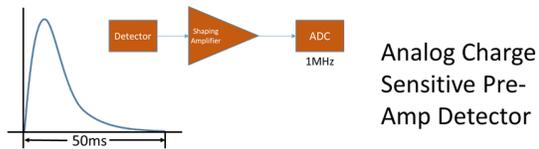
A: We can set the gain here or turn off the auto temperature compensation.

Q: Does the SiPM signal output read the same as PMT?

A: No

Q: What is the difference between charge sensitive analog versus the digital I to V version?

A: The Charge Sensitive Pre-Amp version is designed to feed into existing PMT based electronics. The I to V version is designed to feed into newer, high speed digitizers.



Q: At what point does the noise due to temp overwhelm the low energy signal?

A: Okay at 40°C but somewhere between 40° and 45° this may become an issue

Q: What are the power in and signal out requirements?

A: Power in 5 volts at 15 milliamps

Q: When will the MCA version be ready?

A: Late 2019

Q: Is a Scintillation detector integrated with SiPM more robust than a detector with PMT?

A: No, the scintillator package has the same conditions

Q: Is the performance comparable to a PMT

A: It depends on the size of the crystal but yes for 2" diameter x 2" thick

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