

ID	Name	Description	Rationale	Design Validation	Verification Method
CRO-011	Bad Pixel Fraction	The fraction of pixels outside of performance specs shall be <5%	<p>Isolated loss of pixels can generally be compensated by reconstruction algorithms.</p> <p>The fraction of pixels outside of performance specs should be low enough to have negligible impact to the physics capabilities of the ND.</p>	Full Scale Demonstrator	Test/Inspection
CRO-013	Dead Pixel Tile Fraction	The fraction of dead pixel tiles shall be <0.1%	<p>Loss of a complete pixel tile is difficult to compensate via reconstruction algorithms. It introduces a substantial dead volume within the LArTPC, biasing event selection and pileup rejection. This may likely require detector servicing to restore detector physics performance. There are roughly ~1400 pixel tiles in the ND, hence <0.1% dead tiles.</p>	Test/Inspection	Test/Inspection
CRO-020	Heat density	Pixel tile maximum heat density shall be <20mW/ASIC	<p>Boiling of LAr poses two risks: bubble motion near pixel induces noise, bubble presence in high field gradient (e.g. drift region) can induce HV discharge. Both can be very detrimental to physics performance of the detector.</p>	Engineering Unit Test	Engineering Unit Test