
	iRay 奕瑞	Doc ID	042-501-01
		Version	A7
	Mars1417X Product Specification	Revision Date	2022-08-11
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# Mars1417X Product Specification

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## 1. Product Description and Feature

1.1.54 Mars1417X is a 14x17 cassette-size wireless portable flat panel detector designed for Human used digital radiography.


- Fast workflow
- More image details
- Excellent image quality
- Cassette-size flat panel detector

## 2. Basic Technical Specification

Detector Technology	Amorphous Silicon
Scintillator	CsI
Active Area	350mm × 430mm
Number of Pixels	3500 × 4300
Pixel Pitch	100μm
AD Conversion	16 bit
Trigger Mode	AED (Optional) /Software
Data Interface	Wireless/Wired
Dimension	384mm × 460mm × 15mm
Weight	3.0 kg
Water Proof	IP56
Drop Height	70cm
Static Loading	300kg Uniformly
Battery Capacity	8.5 h
Battery Charging	4h in Charger

## 3. Image Performance

	Typ	Min.
Maximum Linear Dose(uGy)	100uGy	80uGy
MTF @ 0 LP/mm(@RQA5)	1	1
MTF @ 0.5 LP/mm(@RQA5)	87.6%	85.5%
MTF @ 1.0 LP/mm(@RQA5)	70%	65%

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### 1.1.63

MTF @ 1.5 LP/mm(@RQA5)	53.7%	46.9%
MTF @ 2.0 LP/mm(@RQA5)	40.4%	35%
MTF @ 2.5 LP/mm(@RQA5)	30.4%	23.2%
MTF @ 3.0 LP/mm(@RQA5)	22.8%	19%
MTF @ 3.5 LP/mm(@RQA5)	17.3%	11.5%
MTF @ 4.0 LP/mm(@RQA5)	13.5%	10%
MTF @ 4.5 LP/mm(@RQA5)	10.5%	7.3
MTF @ Nyquist(@RQA5)	8.2%	6%
<b>DQE @ 0 LP/mm(2.5uGy@RQA5)</b>	<b>73.4%</b>	68%
DQE @ 0.5 LP/mm(2.5uGy@RQA5)	65.8%	58.7%
DQE @ 1.0 LP/mm (2.5uGy@RQA5)	55.9%	54%
DQE @ 1.5 LP/mm(2.5uGy@RQA5)	47.5%	43.4%
DQE @ 2.0 LP/mm (2.5uGy@RQA5)	40.4%	38%
DQE @ 2.5 LP/mm(2.5uGy@RQA5)	34.3%	29.7%
DQE @ 3.0 LP/mm (2.5uGy@RQA5)	28%	24%
DQE @ 3.5 LP/mm(2.5uGy@RQA5)	22.4%	16%
DQE @ 4.0 LP/mm (2.5uGy@RQA5)	17.3%	14%
DQE @ 4.5 LP/mm(2.5uGy@RQA5)	12.6%	8.1%
DQE @ Nyquist(2.5uGy@RQA5)	8.1%	6%


1.1.63 Note: DQE/MTF values are measured regarding IEC-62220 standards, 2.5  $\mu$ Gy @ RQA5.

## 4. Workflow

Trigger Mode	AED (Optional) /Software
Pre-image Time	$\leq 1$ s
Full Image Time	$\leq 3$ s
Cycle Time	$\leq 6$ s

## 5. Environmental Requirement

Operating Temperature	10°C~35°C
Storage & Transport Temperature with Package	-20°C~55°C
Operating Humidity	5%~90%
Storage & Transport Humidity with Package	5%~95%
Operating Atmospheric Pressure	700mbar~1060mbar
Storage & Transport Atmospheric Pressure	600mbar~1060mbar

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## 6. Detector Reference Drawing

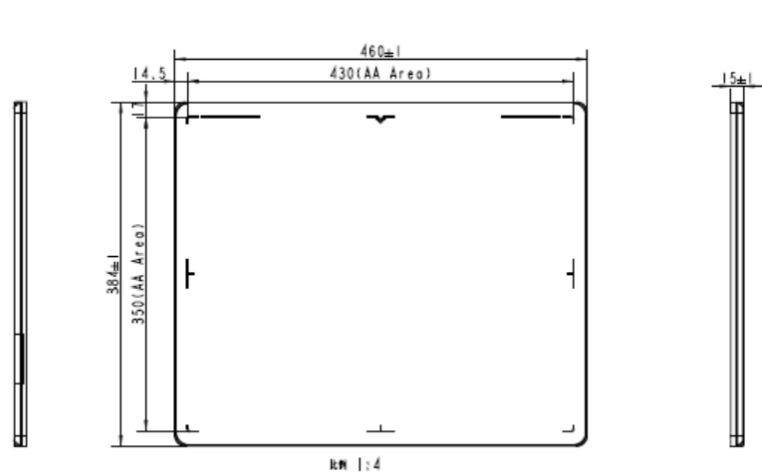


Fig1. Detector Mechanical Outline (unit:mm)