NeuroLF[®] System Preliminary System Specifications



System Overview

Device specifications	
Weight patient seat	130 kg/290 lbs
Total NeuroLF weight	530 kg/1.170 lbs
Dimension (H × L × W)	170×210×80 cm
	5.6×6.9×2.6 ft
Cooling	Air cooled
Seat capacity	200 kg/440 lbs

System Hardware

System Hardware Standard		
Scanner diameter	260 mm	
Detector ring diameter	271 mm	
Axial field of view	163 mm	
Detector material	LYSO	
Crystal size	3.19×3.19×10 mm	
Crystals per module	1536	
SiPMs per module	384	
SiPM coverage of crystal arrays	38%	
Crystal elements total	12288	
SiPMs total	3072	

Environmental Requirements

Scanner Room Environment	
Temperature range	18 – 26 °C
Temperature should not vary more than	±1.5°C/2.7°F per hour
Relative air humidity	20 - 70 %
Power requirements	110/240V, 1kW
Recommended room size	2.7×4 m/9×13 ft

Operator's Room Environment

No constraints on temperature or humidity (just standard computer)	
Recommended room size	2×4 m/7×13 ft

System Software

Acquisition Parameters	
Coincidence window	3.5 – 5 ns
Energy window	Configurable
Acquisition mode	One time frame
Acquisition start/stop	Time based, coincidence counter, manual
Acquisition types	Patient, phantom, daily routine source, calibration source

Reconstruction Parameters		
Imaging matrix	95 x 165 x 165 voxels	
Voxel size (mm3)	1.66 × 1.66 × 1.66 mm ³	
Attenuation Correction	CT-template	
	co-registration	
Reconstruction Time	Approx. 15 min	

NEMA NU-2 2018 Performance

10mm Crystals

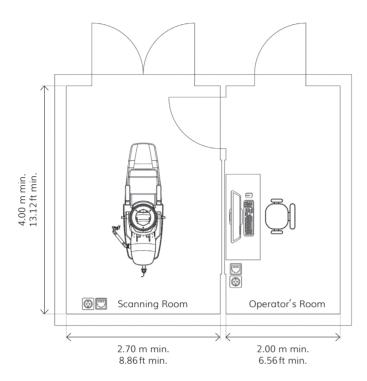
NEMA NU-2 2018 performance are measured with internal tests and shall be considered preliminary.

Spatial resolution at 1cm (average)	2.7 mm
Spatial resolution at 10 cm (average)	3.5 mm
Sensitivity at center of FOV	4.8 cps/kBq / 20 cps/kBq *

* 4.8 cps/kBq is according to NEMA NU-2 2018 standard, the 20 cps/kBq is adjusted to reflect the shorter axial FOV compared to whole-body PET scanners.

NeuroLF® System Preliminary Technical Specifications

Example Room Layout



Note: This layout is for reference purposes only. The system layout varies by site.



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The NeuroLF System is commercially available in the European Union and in the USA.





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