

Type	1	1a	1b
Frequency range (THz)	0.3-3 – optimal frequency range (3 dB flatness) 0.1-6 – full frequency range		
Upper level of dynamic range (μW at 3dB compression point)	0.1		
Noise equivalent power (NEP), $\text{W}/\text{Hz}^{1/2}$	$5-7 \cdot 10^{-14}$	$3-5 \cdot 10^{-13}$	$5-8 \cdot 10^{-13}$
Responsivity of the bolometer, (V/W) <i>intrinsic characteristic of the HEB</i>	$\sim 10,000$	$\sim 3,000$	$\sim 2,000$
Response time (ns)	~ 1	~ 0.1	~ 0.05
Sensitive material	MoRe	NbN	
Bandwidth of HEMT amplifier (MHz)	0.01-200	1-3500	1-8000
Maximum power handling capacity	50 μW		
Lens configuration	Hybrid antenna ($\text{\O}12$ mm silicon hyperhemispherical lens and logarithmic periodic spiral antenna)		
Input beam Max diameter (mm)	10		
Beam pattern	F/3 to F/ ∞ (collimated)		
Type	2	2a	
Frequency range (THz)	1-12 (40)		
Upper level of dynamic range (μW at 3dB compression point)	50		
Noise equivalent power (NEP), $\text{W}/\text{Hz}^{1/2}$	$1-2 \cdot 10^{-11}$	$6-8 \cdot 10^{-11}$	
Responsivity of the bolometer, (V/W) <i>intrinsic characteristic of the HEB</i>	~ 300	~ 100	
Response time (ns)	~ 1	~ 0.1	
Sensitive material	MoRe	NbN	
Bandwidth of HEMT amplifier (MHz)	0.01-200	1-3500	
Maximum power handling capacity	10 mW		
Lens configuration	Silicon lens ($\text{\O}12\text{mm}$ or $\text{\O}4\text{mm}$ silicon hyperhemispherical)		
Input beam Max diameter (mm)	10 (3)		
Beam pattern	F/3 to F/ ∞ (collimated)		
Type	3	3a	
Frequency range (THz)	25-100		
Upper level of dynamic range (μW at 3dB compression point)	2		
Noise equivalent power (NEP), $\text{W}/\text{Hz}^{1/2}$	$1-2 \cdot 10^{-12}$	$4-5 \cdot 10^{-12}$	
Responsivity of the bolometer, (V/W) <i>intrinsic characteristic of the HEB</i>	$\sim 2,000$	~ 500	
Response time (ns)	~ 1	~ 0.1	
Sensitive material	MoRe	NbN	
Bandwidth of HEMT amplifier (MHz)	0.01-200	1-3500	
Maximum power handling capacity	1 mW		
Lens configuration	Germanium or zinc selenide lens ($\text{\O}12$ mm germanium hyperhemispherical)		
Input beam Max diameter (mm)	10		
Beam pattern	F/3 to F/ ∞ (collimated)		