

## Solid-State RF Amplifiers

### 500 MHz

### 1st Generation CRE-331D / CRE-331E

Power Sold: 600 kW

**Customer:** *Helmholtz-Zentrum Berlin (BESSY II)*  
**Application:** *Synchrotron Light Source*  
**RF Output Power @P1:** *80 kW / 40 kW*  
**Efficiency (Wall-plug):** *> 48.5%*  
**Bandwidth:** *± 1 MHz*  
**Number of Transistors:** *130 / 65*  
**Number of Modules:** *130 / 65*  
**Main Combiner Type:** *Waveguide*  
**RF Output Connector:** *WR1800*  
**Amplifiers Sold:** *8*

2013



CRE-331D at BESSY II

### 2nd Generation CRE-331G / CRE-331H / CRE-331I

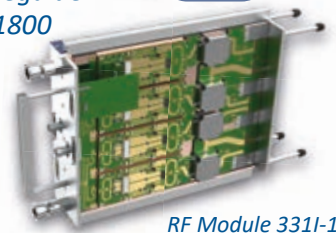
Power Sold: 195 kW



CRE-331I at CLS

**Customers:** *TU Dortmund (DELTA)  
Canadian Light Source*  
**Application:** *Synchrotron Light Source*  
**RF Output Power @P1:** *75 kW / 20 kW / 100 kW*  
**Efficiency (Wall-plug):** *> 49%*  
**Bandwidth:** *± 1 MHz*  
**Number of Transistors:** *128 / 40 / 168*  
**Number of Modules:** *16 / 5 / 21*  
**Main Combiner Type:** *Waveguide*  
**RF Output Connector:** *WR1800*  
**Amplifiers Sold:** *3*

2016



### 3rd Generation CRE-331M / CRE-331N / CRE-331J / CRE-331S / CRE-331O

Power Sold: 2455 kW

**Customers:** *Elettra, Paul Scherrer Institute, ANSTO,  
Diamond Light Source, Canadian Light Source*  
**Application:** *Synchrotron Light Source*  
**RF Output Power @P1:** *130 kW / 150 kW / 45 kW / 120 kW / 320 kW*  
**Efficiency (Wall-plug):** *up to 62%*  
**Bandwidth:** *± 1 MHz*  
**Number of Transistors:** *240 / 240 / 64 / 144 / 320*  
**Number of Modules:** *15 / 15 / 4 / 9 / 20*  
**Main Combiner Type:** *Waveguide*  
**RF Output Connector:** *WR1800*  
**Amplifiers Sold:** *18*

2021



CRE-331N at PSI