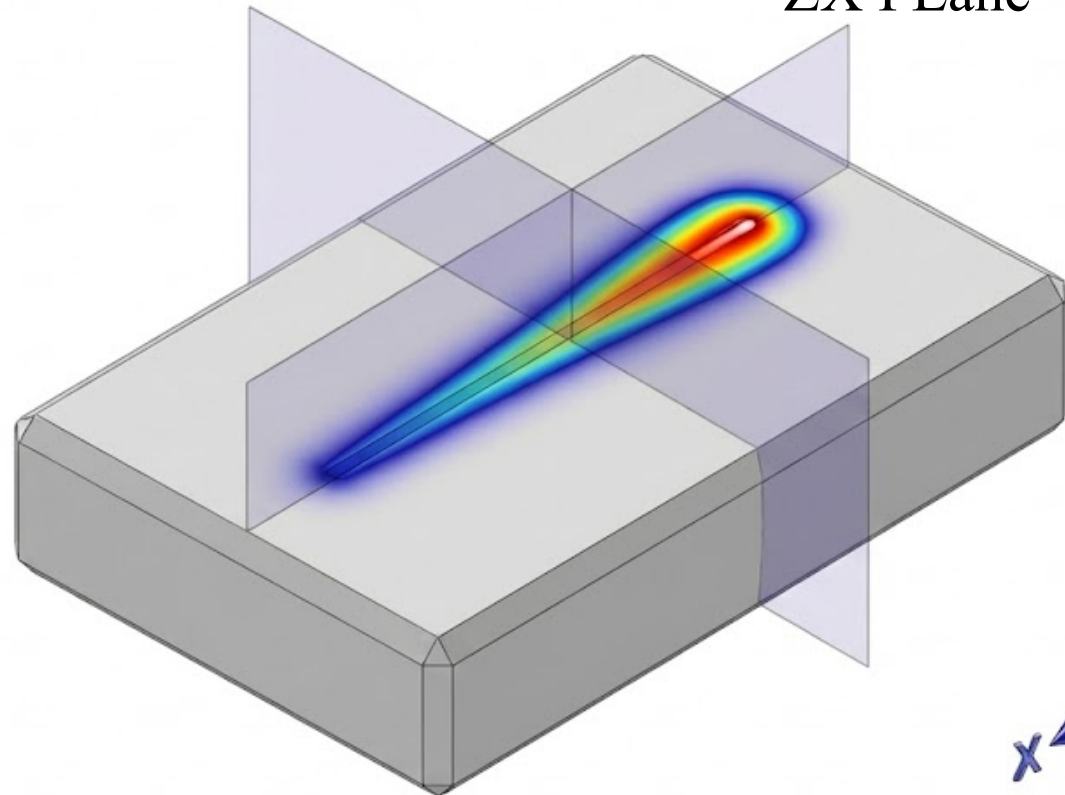
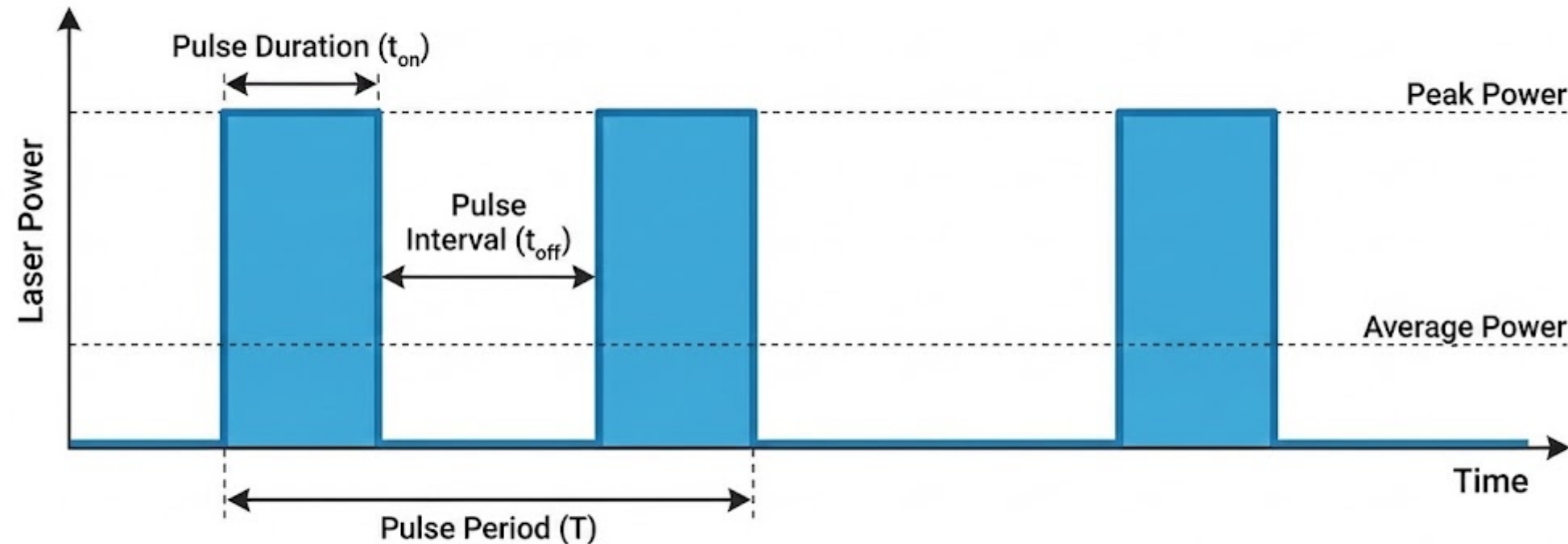


XY PLane

ZX PLane



## PULSE LASER WELDING: DUTY CYCLE & KEY PARAMETERS



### DUTY CYCLE

$$\text{Duty Cycle (D)} = \frac{\text{Pulse Duration}}{\text{Pulse Period}} \times 100\%$$

### FREQUENCY (Repetition Rate)

$$\text{Frequency (f)} = \frac{1}{\text{Pulse Period (T)}}$$

### PULSE ENERGY

$$\text{Energy (E)} \approx \text{Peak Power} \times \text{Pulse Duration}$$