

# LPKF Laser Welding Material Compatibility Chart

transmissive \ absorbing	ABS	ASA	COC	MABS	PA12	PA 612	PA 6	PA 66	PBT	PC	PC/ABS*	PE-HD	PE-LD	PEEK	PES	PMMA	POM	PP	PPS	PS	PSU	PTFE	SAN	TPE
ABS	++	++	x	++			x	x	++	++		x	x		+	++	+	x		x	+		++	++
ASA	++	++		x			x	x	++	+						++	x	x					++	
COC	x		+							x						+				x			x	
MABS	++	x		++			x	x	x						x		x	x			x		x	
PA 12					++	++	-	x	-			x	x		-	x	x	x						
PA 612					++	++	+	x	x							x								
PA 6					-	-	++	++	x			-	-		x	x	x	-			+			
PA 66					x	-	++	++	x	-		-	x		x	x	x	-	x		+			+
PBT	++	++		x	x	+	-	x	++	++		x	x		+	x	x	x		x	+		++	
PC	++		x					-	++	++		x	x			++		x	-	-			++	+
PC/ABS*	++	++							++	++						++								
PE-HD	x				x		-	-	x	x		++	++			-	-	x		x			x	
PE-LD	x				x		-	-	x	x		++	++			-	-	++		x			x	
PEEK														++										
PES	+	x		x		x	x	x	+						++		-	x		x	++		x	
PMMA	++			+	x	x	x	x	-	x	++	-	-		x	++	+	-			+		++	
POM	-	x		x	x	x	x	x	x			-	-		-	+	++	x		x	x		x	
PP	x	x		x	x	x	-	-	x	x			++		x	-	-	++	x			x	x	++
PPS					x	x	-	-		++					-	x	-	x	++				-	
PS	x	x	x	x			+	+	x	-					-	+	x	x			++	x	-	
PSU	+	x		x			x	x	+						++		x	x				++	x	
PTFE																						++		
SAN	++	++	x	x			x	x	-	+		x	x			++	x	x			-		++	
TPE								+		+								++		x				++

++ Excellent weld    
 + Good weld    
 - Poor weld    
 x No weld    
   No research available

\*depending on the blend ratio

Data in this table can vary according to the wavelength of the laser.