QUALITY CRYSTALS

"Crystals 100% Inspected"

INFICON SATISLOH MAXTEK

FIL-TECH	INFICON	COATING	FREQUENCY	FIL-TECH
QI8010	008-010-G10	**Gold**	6MHz	$48
QI8012	N/A	**Longer Life Gold**	6MHz	48
QI8008	750-769-G1	**Stress Relieving Alloy**	6MHz	48
New QI8014	N/A	**Advanced Adhesion Alloy**	6MHz	48
QI8009	008-090-G10	**Silver**	6MHz	48

BALZERS UMICORE

FIL-TECH	BALZERS	COATING	FREQUENCY	FIL-TECH
New QB104GL	N/A	Longer Life Gold	5MHz	$55
QB104G	B489-025-T	Gold	5MHz	55
QB104S	BN845-104-T	Silver	5MHz	55
QB104A	N/A	Stress Relieving Alloy	5MHz	55

ULVAC SLOAN

FIL-TECH	ULVAC	SLOAN	COATING	FREQUENCY	FIL-TECH
New QS3952GL	N/A	N/A	Longer Life Gold	5MHz	$52
QS3952①	1014048	103952	Gold	5MHz	52
QS3950②	1023968	103950	Silver	5MHz	52
QS3954	N/A	N/A	Stress Relieving Alloy	5MHz	52
QU5360	1005360	N/A	Gold	6MHz	52
QU5360A	N/A	N/A	Stress Relieving Alloy	6MHz	52

INTELLEMETRICS

FIL-TECH	INTELLEMETRICS	COATING	FREQUENCY	FIL-TECH
New QI8012F	N/A	Longer Life Gold	6MHz	$48
QI8010F	SN66NG	Gold	6MHz	48
QI8009F	SN66NS	Silver	6MHz	48
QI8008F	N/A	Stress Relieving Alloy	6MHz	48

PHELPS VEECO

FIL-TECH	PHELPS	VEECO	COATING	FREQUENCY	FIL-TECH
QV7120	PE105-02	1487-120	Gold	4.4MHz	$150
QV7120S	PE105-01	N/A	Silver	4.4MHz	150
QV7170-7	PE106-04	1487-170	Gold	5MHz	150

All Crystals 10 Per Pack.

QUALITY CRYSTALS® SELECTION GUIDE

Gold is the most widely known electrode material. It offers low contact resistance and high chemical stability. Gold crystals are used for low-stress metal depositions with Au, Ag, and Cu. Gold electrodes, however, are relatively inflexible, transmitting stresses from deposited films to the underlying quartz, and resulting in frequency jumps and crystal instability.

Longer Life Gold are Fil-Tech's patent pending crystals that combine the low contact resistance and high chemical stability of gold with the plastic yielding qualities of alloy to produce a superior, Longer Life Gold crystal. Fil-Tech recommends Longer Life Gold for anti-reflective coatings and semiconductor processes to dissipate the stresses caused by dielectric and high stress material depositions. Laboratory experiments have shown **over 200%** increased crystal life with deposited MgF2 on Longer Life Gold.

VISIT www.filtech.com FOR 14 TECHNICAL BULLETINS ON QUALITY CRYSTALS SELECTION, FUNDAMENTALS, AND PROPER HANDLING IN ENGLISH, KOREAN AND CHINESE.

Stress Relieving Alloy® is an aluminum-silver composition that is the best electrode for high-stress material depositions, including, SiO, SiO2, MgF2, TiO2, Ni, Cr, Mo, and Zr. Deposited high-stress materials cause erratic crystal performance from high tensile compressive stresses which cause bending of the quartz and subsequent frequency shifts. Alloy dissipates the stresses of the deposited film by plastic yielding/flowing and the alloy electrode "gives" dissipating the stress. The result is a more stable crystal with longer steady, jump-free oscillation. Laboratory experiments have shown as much as a 400% increase in crystal life with deposited MgF2 on alloy.

Advanced Adhesion Alloy™ is the newest crystal from Fil-Tech. Advanced Adhesion Alloy promote greater film adhesion of deposited materials on the crystal surface and work with our alloy electrode to dissipate stresses caused by dielectric materials. Advanced adhesion alloy promote enhanced film adhesion and provide longer, steady, jump-free oscillation.