PHASE RELATED OPTIONS

Storm Products provides a wide variety of high performance products used in applications where electrical length or phase performance is critical to system performance. A brief discussion of specification options is outlined below. For additional assistance, please contact us.

ELECTRICAL LENGTH MATCH BETWEEN ASSEMBLIES — RELATIVE PHASE MATCH

This is typically specified in one of two ways: ± XX pS or ± X° @ YY GHz, relative to a "designated standard" cable assembly within the production batch.

PROs

- *Typically lowest unit cost, shortest lead time*
- *Typically easier to correlate results*
- *Less effort to properly specify*

CONs

- *Requires replacement of set, rather than single cable*

ELECTRICAL LENGTH MATCH BETWEEN ASSEMBLIES — ABSOLUTE PHASE MATCH

This is typically specified in one of two ways: XX nS ± XX pS or X, XXX°± X° @ YY GHz. In lieu of specifying an insertion phase, master standard cable may be built and maintained. This is used most frequently in higher volume applications.

PROs

- *Allows later replacement of single damaged or worn cable assembly*
- *Logistics easier because all cable assemblies are interchangeable*

CONs

- *Typically higher unit cost, more effort to properly specify*
- *More effort to correlate results*
- *Extra expense if master standard cable assembly is built & maintained*

ELECTRICAL LENGTH TRACKING BETWEEN ASSEMBLIES OVER TEMPERATURE

This is typically specified as XXX ppm ± XXX ppm relative to cable assembly electrical length @ 25° C. Generally required when cable assemblies may be at different temperatures within a system and phase is critical. Usually done as a qualification test, not an acceptance test.

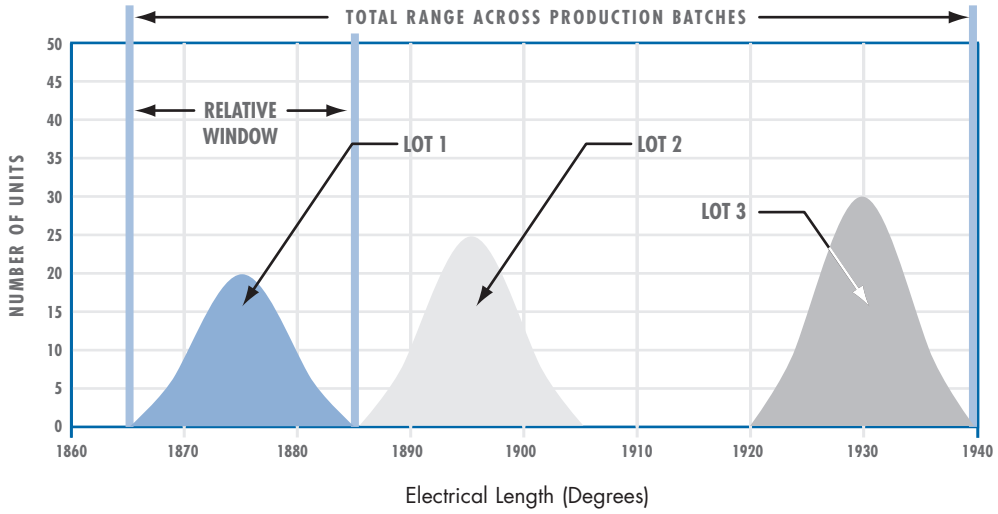
PROs

- *Reduces or eliminates need to calibrate system over time, temperature*
- *Reduces need for thermal management of system*

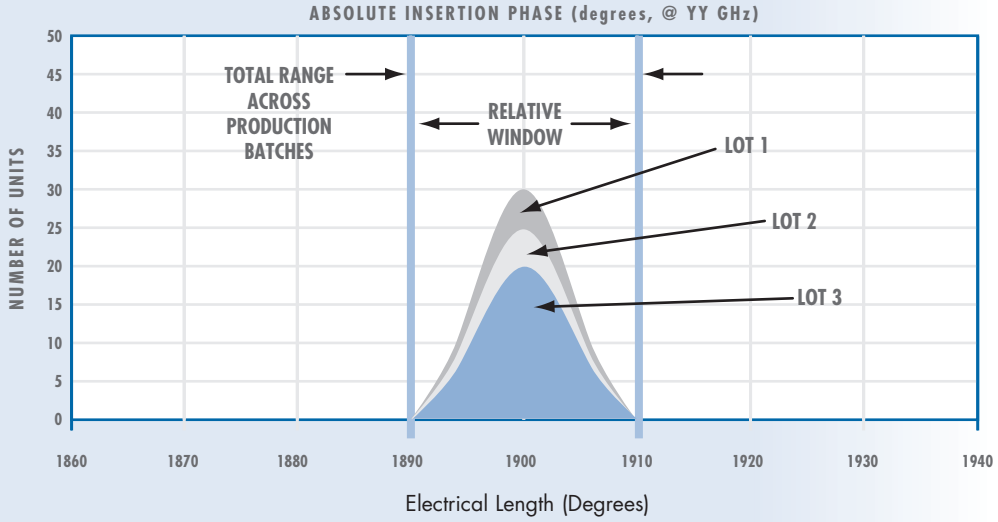
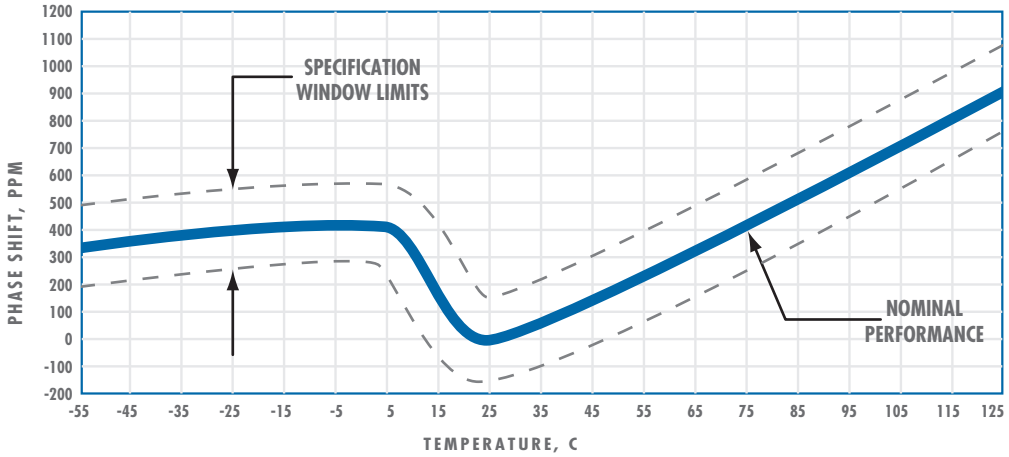
CONs

- *Requires most effort to correlate results*
- *Difficult to validate accurately on short cable assemblies*

Relative Phase Match



Absolute Phase Match



Electrical Length vs. Temperature